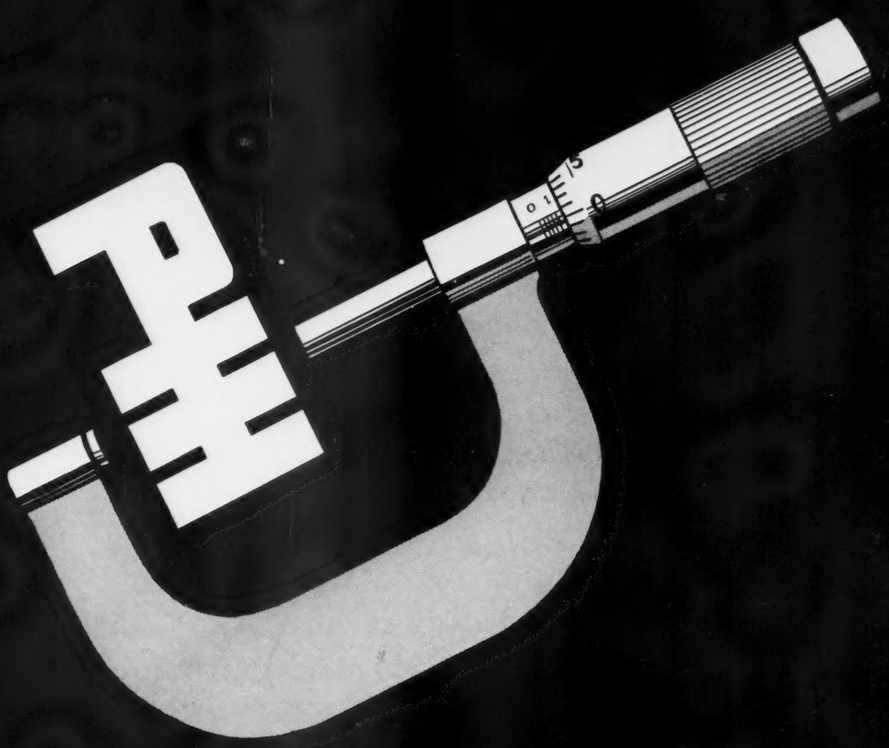
Printing Equipment



What happens to the

GIRL WITH THE COTTON STOCKINGS?

Nothing! The same thing that happens to printed pieces that aren't dressed up in their Sunday best. Competition demands more than ordinary advertising literature—it requires *good* ideas, art, plates, printing... and more than ever, Champion paper, the foundation for good printing.

Champion is the largest maker of printing papers, with a complete line of fine enamels, uncoated book, offset, boards, postcard, and envelope. With all these grades from which to choose, you give your customers most for their money when you dress up their advertising with Champion paper.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

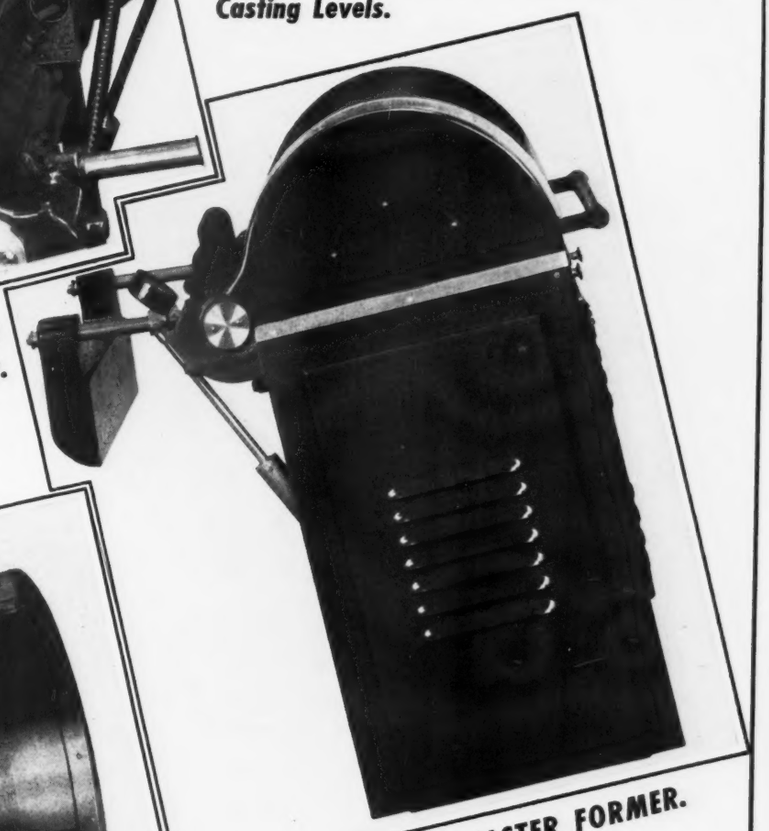
DISTRICT SALES OFFICES

NEW YORK • CHICAGO • PHILADELPHIA • CLEVELAND • BOSTON • ST. LOUIS • CINCINNATI

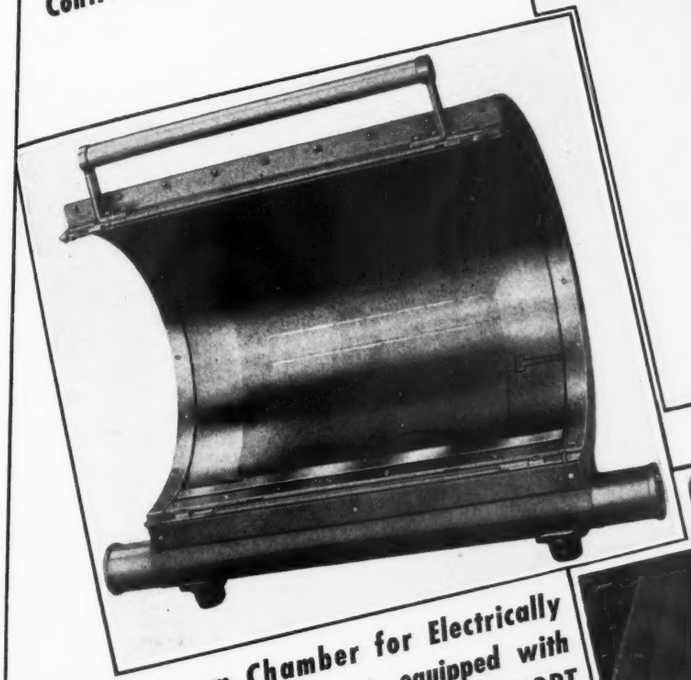
3 Reasons Why

The STA-HI MASTER FORMER is the OUTSTANDING Automatic Vacuum Forming Machine for Dry Mats, effecting Uniform Casting Levels.

Full Automatic Electric Heat Control for both sides of a Dry-Mat.



The New Stahi MASTER FORMER.



Vacuum Chamber for Electrically Baking the back of a dry-mat, equipped with AUTOMATIC FOLLOW-UP BOLSTER SUPPORT BARS, Effecting Perfectly Formed Bolsters on dry-mats.

Self Centering-Full Floating Base Heater, for Electrically Baking the face of a Dry-Mat.

STA-HI CORPORATION

1020 CROCKER STREET LOS ANGELES, CALIF.

Gordon Elrod Appointed

The Ludlow Typograph Company announces the appointment of Gordon F. Elrod as District Manager at Atlanta.

Mr. Elrod succeeds the late E. George Myers, who passed away in January.

Mr. Elrod has had much practical experience in a wide variety of plants in the printing and publishing industry throughout the country. This experience includes composing room service in various capacities in composing rooms, more recently, that of production manager of an important metropolitan daily.

Fluorescent Light for Proof Presses

Vandercook & Sons announce the new Anyangle Fluorescent Feed Board Light for Vandercook Proof Presses, which affords a very close approach to day-

light and is a practical light for color matching. In its beam there is no glare.

The Anyangle Fluorescent Feed Board Light has an ingenious fixture which permits easy adjustment in any position over the press bed. It can be moved to practically any desired working position.

The Light is supplied complete with an 18 in., 15 W. tube, and bracket for clamping to wood or metal feed boards.

Excellent Lighting Conditions for Newspaper Composing Room

RECENTLY the lighting system in the Philadelphia *Inquirer* composing room was changed over to fluorescent lighting. The difference between the "before" and "after" conditions is graphically illustrated in the two accompanying views taken from the same angle.

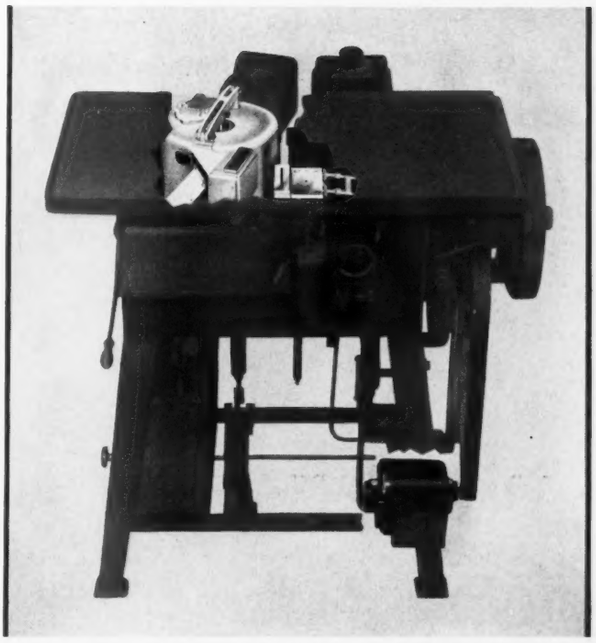
Principally for night operation, light is supplied by 20 w. fluorescent units. All units have been installed in Curtis strip ranging from 2 ft. to 60 ft. long. The lighting fixtures are suspended from the ceiling with pipe hangers or are mounted in composing room equipment canopies.

Chief Engineer Frank Brofft states the tubes have been standardized to the 20 w. size so that only one size tube need be kept in stock for replacement purposes.

In the illustration above is shown partial view of Philadelphia Inquirer composing room before installation of fluorescent lighting system.

In the view below, taken at practically the same angle, is shown the same section of the Inquirer's composing room after installation of 20 w. fluorescent lighting units installed in Curtis strip ranging from 2 ft. to 60 ft. long.

The Mechanism and Operation of the LUDLOW is Simplicity Itself



Cut-away view of the Ludlow showing the three major elements of the machine—crucible, mold, and motor.

In the machinery necessary to produce slug-cast composition one might naturally expect to see a cumbersome, complicated assembly of mechanisms and devices. It's rather surprising, therefore, to find that with the Ludlow utmost efficiency has been attained in a machine of extreme simplicity.

The Ludlow machine comprises three major elements—crucible, mold, and motor. These, with their simple automatic operating and controlling movements make up this most efficient machine.

As a direct result of this simplicity of mechanism and of the basic rightness of its design and construction, the Ludlow is remarkably quiet and smooth running. Absence of noise means absence of shock, strain and wear, making for long life and freedom from breakdowns and repairs.

It is equally simple to operate the Ludlow. A holder or matrix stick containing the line of typeface matrices is locked in casting position and a touch of a lever instantly starts the production of the line-slug. Mold and matrices are brought together, molten metal is forced through the mold, the cast cooled by water circulating within the mold, and the finished slug delivered. All this is accomplished without machine or mold change for length of line, typeface or pointsize, except when it may be desired quickly to change the mold for casting the smaller typesizes to set solid on a 6-point slug.

From start to finish, the Ludlow system is simplicity itself. This simplicity and the resulting true flexibility, plus rugged machine construction and precision manufacture, contribute importantly to the efficiency and speed with which Ludlow composition is produced.

Modern newspaper production demands require the advantages and economies which only the Ludlow can supply.

The Ludlow story is both interesting and instructive. It will gladly be sent, together with specimen showings of Ludlow typefaces, upon request.

LUDLOW TYPOGRAPH COMPANY

2032 Clybourn Avenue · · Chicago, Illinois

Set in Ludlow Radiant Medium

Easy changes with swing-away delivery on the KELLY CLIPPER

Eliminate lost time lifting forms from the bed, and carrying them back and forth between stone and press. The Clipper's swing-away delivery enables you to make corrections and changes, and plane down . . . with the form on the bed. Time saved . . . plus a top speed of 5000 impressions per hour, mean more salable printed sheets and more profit per hour. The Clipper has more features for profit than any press its size. Make this simple test. Compare all the Clipper's features with those of your present equipment, then refigure your last four or five jobs as if you had a Clipper. The results will show you how a Clipper can increase your profits and cut operating costs. You can afford to own a Kelly Clipper. Ask your ATF Salesman for press sheet and details.

CLIPPER FEATURES

① Quick-set Stream Feeder	② Accurate Register	③ Rigidity of Impression
④ Convenient Access to Cylinder	⑤ Easy Access to Form	⑥ Adequate Ink Distribution
⑦ Positive Delivery	⑧ Top Speed 5000 per Hour	⑨ Automatic Lubrication

The Press the Pressmen Okayed!

One Printer says: *". . . We save time in makeready and in changing forms owing to the Clippers' impressional strength and simplicity of construction. We have just completed a hairline register job with beautiful results. We can't say enough for our Clipper."* (Name will be furnished on request.)

American Type Founders

200 ELMORA AVENUE, ELIZABETH, NEW JERSEY · Branches in Principal Cities

Types used: Grayda, Franklin Gothic Italic, Bernhard Gothics

A TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

TECHNICAL BOOKS

- ESTIMATING GRAPHS FOR PRINTERS — *By Fred W. Hoch.* Bound in 16-page, 8½ in. by 11 in. size, printed on heavy white paper. Simple, concise method of figuring accurate production costs based on economic industry cost values. Graphs are based on cost values to which is added fair profit before quoting selling prices. $3 per copy, cash with order.
- PHOTOGRAVURE — *By H. Mills Cartwright.* Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
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- FIFTH PRODUCTION YEAR BOOK — An encyclopedia or text book about all printing processes and production matters. Invaluable to the mechanical executive and production man. Lots of color. Bound in cloth, silver stamped, 424 pages, 8½ in. by 11¼ in. Price $5, cash with order.
- ENCYCLOPEDIA OF LITHOGRAPHY — *Compiled by Russell L. Miles.* Besides technical information about all details of offset-lith set forth in simple language, this book contains discussions on various phases of offset-lith by well known writers. Bound in blue cloth, gold stamping. Illustrated. Size 6 in. by 9¼ in., 212 pages. Price $4.50 per copy, cash with order.
- ETCH PROOFS — *By J. H. Bartz.* Booklet, approx. 6 in. by 9 in. 40 pages and paper cover. Tells reasons for and how to take reproduction proofs. Price, $2.00, cash with order.
- HANDBOOK FOR PRESSMEN — *By Fred W. Hoch.* Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. $3 per copy, cash with order.
- THE PRACTICE OF PRESSWORK — *By Craig R. Spicher.* We offer copies to our readers at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- MANUAL OF STEREOTYPING — *By Joseph Goggin.* This 256-page book conveys latest technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.

• *Send All Orders With Remittance to*

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

Printing Equipment Engineer

LEADING ARTICLES
MARCH, 1940

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PRINTING EQUIPMENT *Engineer*, a monthly publication. Vol. 59, No. 6. Published at 1276 West Third St., Cleveland, Ohio. Don Will, Publisher, MacD. Sinclair, Editor. Adam Henri Reiser, Associate Editor. H. P. Taylor, Adv. Manager Eastern Representative: Russ Birchfield, 509 Fifth Ave., New York, N. Y.; phone VAnderbilt 6-0890. Western Representative: E. P. Bloomster, 232 East Erie St., Chicago; phone SUPerior 2444. Copyright 1940 by The Willsea Pub. Co. Subscription price per year, $3.50 in advance in U. S. A. Single copy regular issues, 25c. December Reference Issue $1. June and August Issues, 50c each. Subscriptions in foreign countries, $4.50 in advance, U. S. currency. Printed in U. S. A.

Member Controlled CCA Circulation Audit

Tapered Roller
TIMKEN BEARING
EQUIPPED
THE SYMBOL FOR "MILES OF SMILES" THROUGHOUT INDUSTRY
"Timken Bearing Equipped" is more than a sign of an existing condition . . . more than mere identification of one product with another. It is a powerful, vital force by means of which modern industry increases the efficiency of its machines, steps up its production and reduces its costs.
Wherever this symbol is seen—on any piece of equipment —it signifies that the equipment manufacturer has declared himself on the side of saving and opposed to waste. Thus it has become a "buy mark" to thousands of machinery users who are conscious of the constantly growing need for higher speeds, greater accuracy, lower operating and maintenance expense and longer machine life. Such equipment cannot help but bring "Miles of Smiles" to the faces of everyone concerned with its manufacture, sale and operation.
THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO
TIMKEN
TAPERED ROLLER BEARINGS
Manufacturers of TIMKEN Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; TIMKEN Alloy Steels and Carbon and Alloy Seamless Tubing; and TIMKEN Rock Bits.

"John, that New SEYBOLD is Helping us Make Money"

This is the Electric Auto Spacer, the most accurate, fastest cutter built for multiple and repeat work. Made in 8 different models 94" to 40".

SEYBOLD SALES AND SERVICE:

NEW YORK: E. P. Lawson Co., Inc. 426-438 W. 33rd Street

CHICAGO: Chas. N. Stevens Co., Inc. 110-116 W. Harrison St.

ATLANTA, GA.: Harris-Seybold Sales Corporation, 120 Spring St., N. W.

DAYTON: Central Sales District 832 Washington Street

SAN FRANCISCO, LOS ANGELES, SEATTLE: Harry W. Brintnall Co.

TORONTO, MONTREAL: Harris-Seybold-Potter (Canada) Limited

LONDON, ENGLAND: Smyth-Horne, Limited

LATIN AMERICA AND WEST INDIES: National Paper & Type Co., Inc.

● What can you say about *your* paper cutting machines, Mr. Printer?

Are they helping you make money? Or do you have one or more that is a liability? Is it working in your shop on "borrowed time"— time borrowed from the scrap heap?

Do you, every day, risk a sizeable investment in paper and presswork on an old, unreliable, obsolescent cutter that paid out its cost years and years ago?

Perhaps you haven't yet seen the new 1940 Seybolds! Maybe you hadn't realized how much cutting machines have been improved since yours were built —how more accurately a modern machine cuts, how much more dependable it is, how much safer.

CUTTERS FOR EVERY NEED

Seybold makes paper cutters to meet every graphic arts need, from the famous high-speed Electric Auto Spacer down to the 34" handclamp cutter.

Why don't you find out what a new Seybold will do for you? When you write for our catalog, indicate what your cutting requirements are and we will send you full descriptions and performance data on machines that meet your needs—without obligating you in any way.

SEYBOLD DIVISION, Harris • Seybold • Potter Co.
832 WASHINGTON STREET • • • DAYTON, OHIO

SEYBOLD HAS THE EDGE

IS YOUR FOUNDRY a BOTTLENECK?

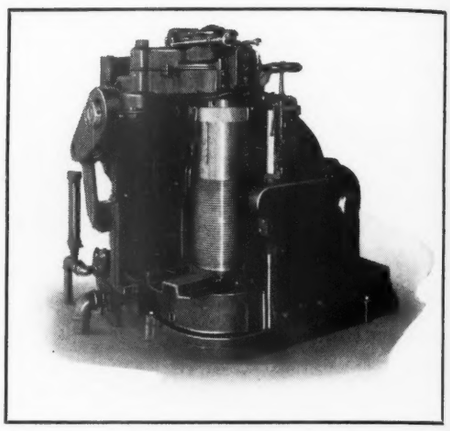
WHEN NEWS "PILES UP" in the foundry . . . jammed for lack of adequate capacity . . . you're wasting some of the most precious minutes of the day!

Many newspaper executives have found that schedules can be pared to the bone — while at the same time presswork quality is *improved* — through the use of the Automatic Autoplate Machine and the Heavy-Duty Autoshaver.

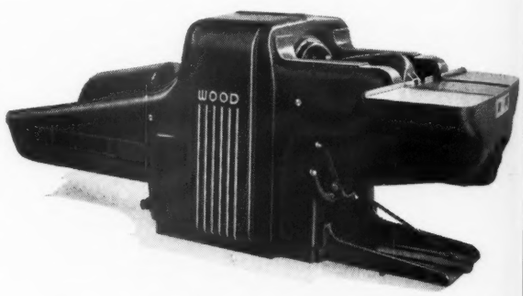
The Automatic Autoplate works at a fixed speed of *four plates a minute*. You simply insert the matrix, press a button, and remove plate and tail. One minute and fifteen seconds after the first mat is inserted, four starter plates are ready for the pressroom. Exactly four plates a minute follow, as long as the machine is operated. And the briefer contacts between the mat and the hot metal mean *more casts per mat*.

The Heavy-Duty Autoshaver does the same efficient job in plate finishing that the Autoplate does in casting. Two independently adjustable shaving knives rough-cut and finish the plate, which can be *double-shaved*, automatically, by the setting of a lever. And the rugged Heavy-Duty Autoshaver, weighing 1½ tons more than the Standard Autoshaver, occupies no more floorspace.

Write for more details about the exclusive time-saving, money-saving features of these two machines. They're a great team!



The speed of the Automatic Autoplate is fixed and dependable — four plates a minute. Anyone can estimate quickly, by glancing at his watch, when a given number of plates will be ready for the pressroom.



The Heavy-Duty Autoshaver — another WOOD development for promoting better newspaper presswork. For less strenuous and less exacting requirements, the Standard Autoshaver, widely used in newspaper plants for many years, is also available.

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • NEW YORK OFFICE: 501 FIFTH AVENUE

GOSS

HIGH SPEED AND ANTI-FRICTION SALES SINCE JANUARY 1ST

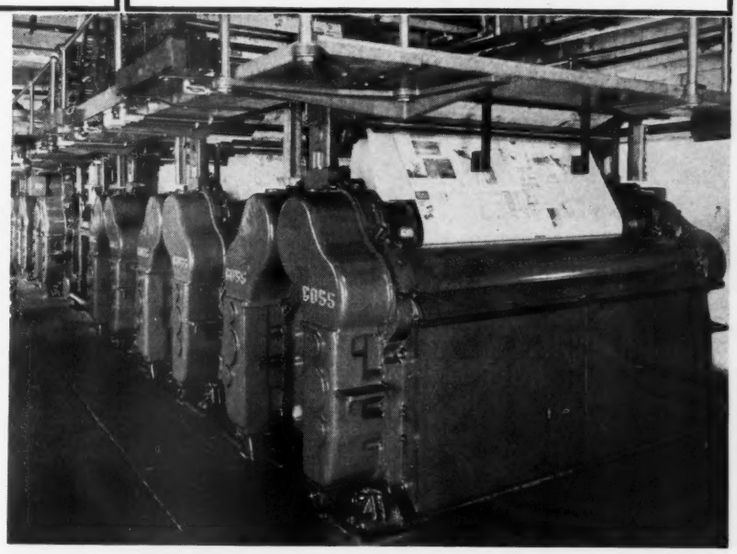
1940 JANUARY 1940						
Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1940 FEBRUARY 1940						
Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

28 UNITS

★

6 PAIRS OF FOLDERS



The extent of Goss sales during the first eight weeks of this year is evidence of the predominant preference for Goss presses. Orders to date include 24 High Speed Anti-Friction Units and 5 Pairs of Folders; 4 Standard High Speed Units and 1 Pair of Folders, and an 8-cylinder Multi-Color Press.

These sales also indicate that with all the work now in process, the Goss plant still has ample capacity to handle a huge volume of new business. All 1939 contracts are being filled on schedule with sufficient provision to produce every publisher's press equipment needs during 1940. Consult with Goss at once on present and future commitments. Write for details.

THE GOSS PRINTING PRESS CO.
1535 S. PAULINA ST., CHICAGO

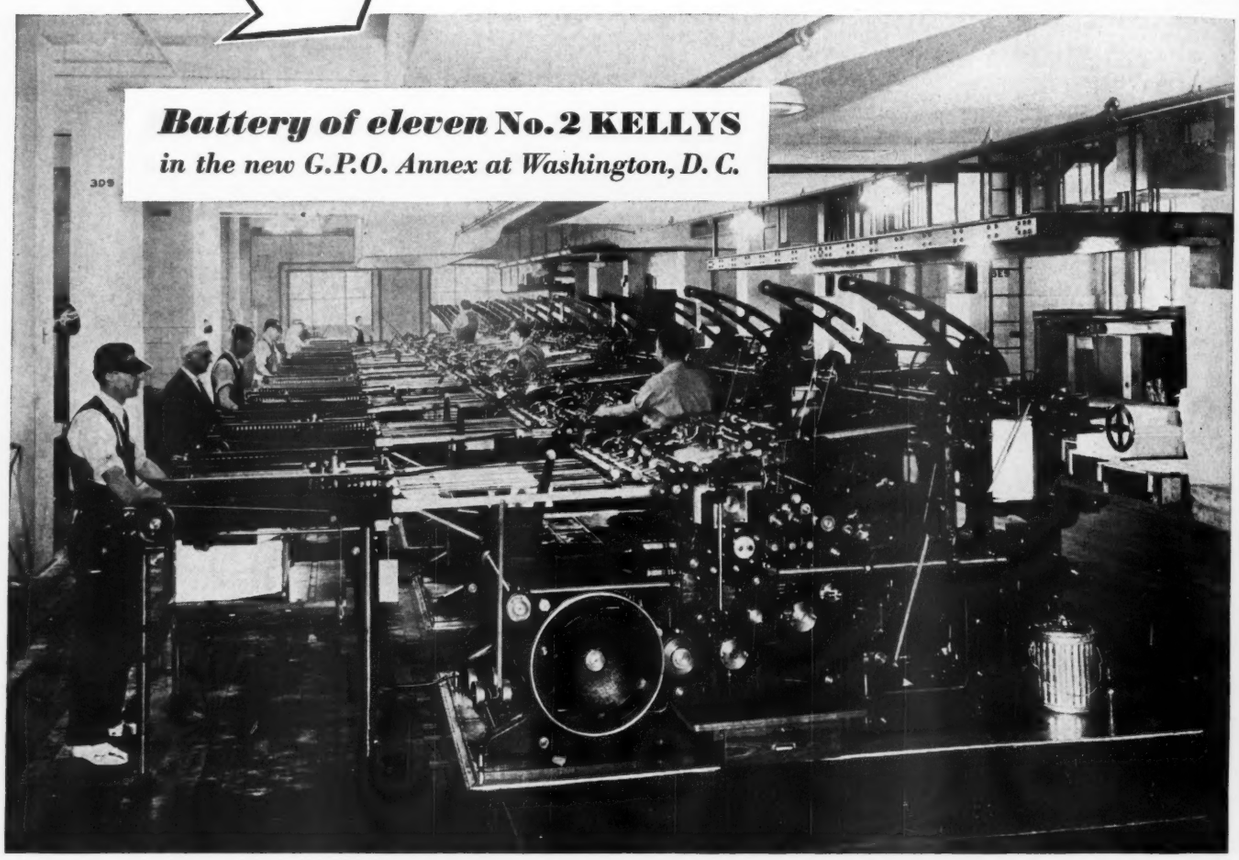
★

NEW YORK
220 E. 42nd ST.

SAN FRANCISCO
707 CALL BUILDING

LONDON, ENGLAND
GOSS PRINTING PRESS CO., Ltd.

Choice of the New G.P.O.



***Battery of eleven* No. 2 KELLYS**
in the new G.P.O. Annex at Washington, D. C.

The No. 2 KELLY is the choice of the Government Printing Office for its efficiency in the 24x35 inch sheet size range . . . and is preferred by economy-minded printers throughout the nation for high quality presswork.

AMERICAN TYPE FOUNDERS

200 ELMORA AVENUE • ELIZABETH • NEW JERSEY • *Branches and Agents in Principal Cities*

GPO *new eight-story annex building completed in Washington, D. C.— Interesting details about U. S. Government's new Building No. 3 and production in big printing and publishing plant.*

By MAC SINCLAIR

UNDOUBTEDLY the finest and most important new building dedicated to the production of printing in 1940 is the Government Printing Office's H Street eight-story Annex, Washington, D. C., which was accepted for the United States Government and turned over to Public Printer A. E. Giegengack and his executive personnel in February. The new H Street Annex (or Annex Building No. 3 as it is alternatively called) may be considered the main building of a group of four.*

The new building has a frontage of 175 ft. on North Capitol Street and extends 384 ft. along H Street Northwest. The gross floor area is 564,639 sq. ft. This floor space in the new building added to the other permanent buildings occupied by the Government Printing Office, gives a total area of 1,374,281 sq. ft. or approximately 32 acres of floor space. This area does not include the space occupied by the Government Printing Office which does printing for the Library of Congress, nor the seven-story building leased temporarily for use by the Superintendent of Documents during the construction period of the new building.

The new building is of structural steel framework and reinforced concrete floor slab construction. Brick walls harmonize with the exterior of the adjacent eight-story No. 1 building which heretofore has housed the executive offices and production departments but which will now be vacated and will be used for bindery purposes and by the Superintendent of Documents.

In general, the floors throughout all workroom areas are 2½ in. end-grain, wood-block flooring assembled in strips by means of splines. Walls are brick and the ceilings are concrete.

Certain departments in the building are air conditioned. In these areas, the windows are double glazed and the walls have tile wainscot, above which on sunny walls "corkcoustic" tile extends to the ceiling. Acoustical treatment, mostly of acousti-celotex, is provided in presswork, linotype, monotype keyboard, monotype casting and proofrooms.

The floor slab live load capacity mostly is 400 lbs. per sq. ft., with 300 lbs. for beams. First floor storage capacity is 500 lbs. for both slabs and beams, and 1000 lbs. capacity per sq. ft. is provided in the metal storage room.

Elevators

Eleven elevators are grouped in banks of two and three. Those for freight range 7500 lbs. up to 20,000 lbs. capacity. The 7500 lb. capacity, however, predominates, as it is suitable for carrying a lift truck with one skid of paper approaching 4000 lbs. in weight. There are eight dumbwaiters ranging from 150 lbs. up to 1500 lbs. capacity.

Air Conditioning

Carrier Compressors, Buffalo Forge Pumps, Fans and Dehumidifiers, Johnson Control System air conditioning equipment is provided for conditioning the offset and tabulating card pressrooms, paper storage and roller making departments on the second floor; on the third floor for the job pressroom; on the entire fourth floor for the main pressroom; on the fifth floor for the *Congressional Record* and the patents pressrooms, and for the wood-blocking room on the seventh floor in the plate-making division.

Refrigeration for air conditioning is supplied by two 330 T. units located in the basement of the building. Dehumidifiers, fans, pumps, etc., are located adjacent to the conditioned areas.

At the required cooling or dehumidifying times, the equipment is designed to maintain a dry bulb temperature not exceeding 80 deg. when outside conditions do not exceed 95 deg. dry bulb and 78 deg. wet bulb, and to maintain 55% relative humidity at all times regardless of outside temperatures up to 78 deg. wet bulb.

At times requiring heating or humidifying, the equipment will maintain a minimum dry bulb temperature of 76 deg. F. and a relative humidity of not less than 50% when the outside temperature is not below 0 deg. F.

The entire building is protected by an automatic sprinkler system. In paper

(*Continued on Page 15*)

*An illustrated story about the Warehouse which was completed on February 4, 1938, appeared in the June, 1938, issue of *Printing Equipment Engineer*. This building is used for paper storage, postcard and money order printing and is air conditioned throughout. It is connected by a tunnel running under North Capitol Street to the new building described in this article*

"As Is" Equipment — Have You Ever Been "Burned"?

[AN EDITORIAL]

OF LATE there have been an increasing number of auction or forced printing machinery sales. No one, however, would be foolish enough to assert that these sales should be prevented. It is regrettable, of course, that printing plants from time to time must go under the auctioneer's hammer. Our main object in discussing the subject at all is to suggest that production executives should investigate thoroughly the modernity of the equipment offered for sale, its state of obsolescence (usually most of such equipment is more or less obsolescent), and most important of all, to ascertain whether the probable price is relatively in line with comparable new equipment, *after charges have been added to the buying price for putting the equipment in good productive condition.*

A printing plant executive who either buys or permits his employer to buy "as is" printing equipment on his recommendation without some reasonable guarantee as to the condition of the equipment or supplies certainly is letting himself in for trouble —both for himself and with his employer.

In one or two instances which have come to our attention, the manager couldn't understand why his executive didn't want to buy distress or auction machinery, not realizing that perhaps the obsolescent or out-of-repair condition of the machinery may have contributed to the downfall of the firm from which the equipment was being auctioned off. In these instances the production executive is functioning truly for the very purpose for which he has been hired by the manager—he is guarding the manager's interests by insisting upon the purchase of machinery that will do things that can't be done on "as is" bankrupt machinery.

In some cases, printing plant managers, not realizing the danger to production in this sort of equipment insist upon its purchase. They tell their executives they "can't afford" new machinery. It is, indeed, a short-sighted policy to insist upon the purchase of equipment which will not relieve a difficult production condition, even though the equipment may be in good operating condition.

Because of this employer attitude, executives have weakened and have bought obsolescent machinery just because they couldn't get better, hoping somehow that it will meet production needs. The executive who weakens once will have difficulty afterwards in persuading his employer to buy new equipment.

Obsolescent machinery has no place in the modern printing plant It may give forth some production but it also drains normal profits Mostly, printing plant executives are aware of this. They should always be on their guard against the drain on plant operation caused by obsolescent machinery.

Before purchasing "as is" machinery, the executive should check the appraised price with the original manufacturer of that equipment if possible, or some person who is in a position to know, as to the age, condition and productive value of the equipment. Sometimes equipment has passed through several hands and it is difficult for the manufacturer to furnish the serial number.

Then again, if you are contemplating the purchase of type metal, for instance, it is well to get current market quotations, try to find out the brand of metal so as to secure information about its former owner's regard for keeping it up to standard content. Not long ago, a ridiculous situation existed where type metal was auctioned off at ½c per lb. higher than the existing quotations for new metal. The purchaser didn't know the condition of the metal, nor whether it was deficient in one or more of its original elements.

If your employer's finances are such that you must buy something other than a new machine it certainly makes sense that for your own best interests it would be well to consult a manufacturer or reliable dealer to see if a guaranteed and well rebuilt machine can be obtained. In this way, you will be saving yourself unanticipated expense such as would occur in putting the "as is" purchase in shape after it has been delivered to your plant.

In one instance that has come to our attention, a printing executive purchased an "as is" 44 in. paper cutter which was found to trim at an angle after it had been installed in his plant. The time and money spent in putting the machine in good condition exceeded the amount of money required to purchase a new machine which would trim true and would have been equipped with modern safety devices. Paper cutters, by the way, must trim accurately. If any printer thinks much of his reputation for good work, he may injure that reputation with inaccurate equipment.

In another case, an old offset press was purchased. The press was delivered and the plant machinist started "fixing it up." After the expenditure of considerable time and money the press was placed in such condition that it would print fairly well on black and white work only. Later on, the production executive was heard to ask: "Sure, we fixed it up—but what have we got?"

All of which makes us remark: Obsolescent machinery can't be made to compete with modern machinery. The danger in purchasing auction equipment is in its obsolescence and in paying more than the equipment is worth from a production standpoint. The other thought is: *The executive who buys obsolescent machinery is contributing to the delinquency of the industry.*

COLD SETTING INKS

Supplied in lumps, melted in rotary press ink fountain and applied to printing element in liquid form harden instantly on touching paper.

By FRANK G. BREYER*

NEW "cold setting" inks supplied to printers in lumps like coal, are melted in the ink fountain of the rotary printing press and are applied to the type, which is heated, in melted liquid form. The melted ink hardens instantaneously on touching the relatively cold surface of the paper, allowing presses to be run at high speeds without smearing the inked impression. Ordinary printing ink is a fluid paste which must dry and harden on the paper. On modern high speed rotary presses, heat is applied to the printed sheet to hasten the hardening process, and consequently these inks can be considered "heat setting" in contrast to the new "cold setting" inks which become solid by contact with the cold paper.

A new approach to the problem of high speed printing . . . is now offered in the form of ink and apparatus combined in a printing process which sets or dries ink by cold, not by heat. This new "Velo" cold set printing process is a reversal in the trend—"the man bites the dog" so to speak.†

Cold set printing is the process of drying ink by freezing instead of by absorption, evaporation, oxidation, or polymerization. All inks when dry on the paper are solid mixtures of color and binder. In the processes of printing, however, the ink must be fluid in order to feed from the fountain to the relief printing surfaces in controlled amounts. In customary printing, this fluidity is obtained by using fluids and a fluid mixture of color and binder is deposited on the paper. This creates the printer's major problem, drying.

In the cold set process, invented by Walter Huber, the fluidity of the ink necessary to feed it properly from the fountain to the relief surfaces is realized simply by melting the solid finally wanted as a deposit on the paper. The fountain, the ink carriage steels and the plate cylinder are all heated by hot water from within. This keeps the normally solid ink fluid and controllable. When the hot ink touches the cold paper (that is, cold as compared with the temperature of the ink) it freezes or solidifies without penetration and remains as a solid deposit in relief on the top of the fibers.

The foregoing is a fair statement of what cold set printing is, and obviously it makes very little difference what kind of surface you print on. The fibers may be loose or tight. They may be uncoated or coated. The cold set ink from a halftone dot, for example, always sits on top of the fibers or coating in sharp relief right where it was deposited. There is no spread or penetration due to fiber suction as with liquid inks.

When the hot ink touches the cold surface of the paper, the ink film next to the paper thickens enormously, while the surface of the ink next to the heated metal relief surface remians highly fluid. As a consequence, the ink, literally, is pulled away from the relief surfaces. This prevents fill-ins in fine-screen work. We are thus able to print on ordinary newsprint with 133 line screen (ordinarily 50 to 65 line screen is used) and retain the sharpness of outline and absence of fill-in characteristic of much higher grade paper. Of course, we get better results with better paper. The difference, however, between the old and the new process is sharper on the more porous stocks. As the full advantages of the kiss type of ink deposit mechanism are realized, much over impression and many makeready maneuvers may be avoided.

Nothing is more in keeping with the times than the removal of all limitation on speed the new ink permits. Inasmuch as the cold of the paper is the setting agent, the faster the paper goes through the press, the greater is the setting effect. The only limitations on speed of the commercial presses that we have operated with so far are mechanical and inherent in the machine itself.

Another consequence is that since there is no wet ink to smear or offset, no blotting paper, offset webs or offset compounds are needed.

Undoubtedly of interest to paper men is the fact that we do not heat the paper . . .

The ink is a solid, not a liquid or a paste; it is all ink, no volatile, no waste. Up to the present time the ink has been furnished only in a solid mass in regular ink containers, from which it is broken out with a hammer. When broken up, a bucketful of black ink looks like a bucket of coal. The cracked pieces of solid ink are dumped at intervals into a regular ink fountain which has been water jacketed and insulated. Hot water (around 200 deg. F.) is circulated through the jacket at a rate determined by the rate of feed of ink to the carriage. In this fountain the ink is melted and brought to the temperature necessary for proper fluidity to feed out on the fountain ball, across the ink carriage and on to the form rollers and the printing forms under proper control. The ink cylinders, the vibrating steel cylinders and the plate cylinder are all similarly fed with hot water in controlled amounts. The rubber or synthetic rollers, which will withstand high temperatures, are not heated.

Practically all types of presently operating web presses can be readily converted to this process of printing. With the exception of hot water connections to the shafts and fountain, there is no other outward change of the press and the operation is the same as with regular ink except that the offset mechanism is eliminated. Further, if for any reason it is desired to print with regular letterpress inks, this can be done simply by turning off the heat.

*Singmaster & Breyer, Chemical Engineers, New York, N. Y. Abstract of address delivered before the Graphic Arts Session of the Technical Association of the Pulp and Paper Industry, Hotel Roosevelt, New York, February 21, 1940.

†"Velo" is the trade mark of J. M. Huber, Inc., manufacturers of inks, for cold set inks and printing processes.

MECHANICAL EXECUTIVES

are invited to tell other production and mechanical executives about any production helps or mechanical improvements which have been devised in their plants. Just get out the old pencil or have an operator set it up and send proof to Mac Sinclair, Editor

Fairfield Booklet

Mergenthaler Linotype Company has published a de luxe booklet announcing the cutting of Fairfield roman and italic, the first type face designed by Rudolph Ruzicka, in sizes 8, 9, 10, 11 and 12 pt. W. A. Dwiggins contributes an essay on the work of Mr. Ruzicka. Included is a note on the Fairfield face by its designer. Miniature reproductions of the drawings and engravings by Mr. Ruzicka are also shown.

Apologies to Jellison

Our apologies to Machinist Percy Jellison of the Newburyport (Mass.) *Daily News*. In the story *Maintenance Record For the Smaller Composing Room*, February issue, Newburyport was placed in New York instead of Massachusetts.

Modern Pioneers in the Printing Industry Receive Awards

CELEBRATING the 150th anniversary of the founding of the United States Patent System, sectional dinners throughout the nation were held, at which men who contributed outstanding inventions to industry received awards in recognition of their work. The dinners were held under the auspices of the National Association of Manufacturers, local Chambers of Commerce and state Manufacturers' Associations.

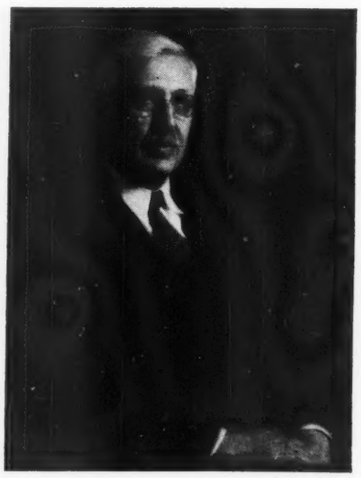
In the Cleveland area, a dinner was held at Hotel Statler on Wednesday night, February 7 under the auspices of the Associated Industries of Cleveland, Ohio Manufacturers' Association and the National Association of Manufacturers. The chief speaker was Walter D. Fuller, President of the Curtis Publishing Company.

Alfred F. Harris Honored at Cleveland Pioneer Banquet

At the Cleveland dinner, 15 Clevelanders won honors for their inventions. Among those honored was A. F. Harris, Chairman of the Board, Harris-Seybold-Potter Company, for his development of the method and machinery for the offset-lith method of printing.

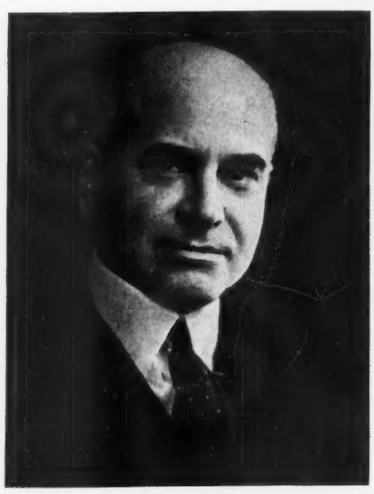
In Philadelphia, the Chamber of Commerce held a banquet on the evening of Friday, February 16. At this time, Mauritz Christian Indahl and William Carl Huebner were recipients of Modern Pioneer awards.

The Modern Pioneer award was given to Mr. Indahl "For inventions in the field of machine typesetting and typemaking for the Lanston Monotype Machine Company which have been major contributions to the dissemination of knowledge, the development of culture and education, and the stimulation of business and industry through the medium of the printed word." Mauritz C. Indahl has been connected with the Engineering Department of the Monotype Company at Philadelphia for almost 40 years, and for the past 25 years has been its Chief Engineer. He is the inventor of a number of features of Monotype operation and the designer of the Monotype Material Making Machine and the Monotype Giant Caster.



Mauritz Christian Indahl, Chief Engineer, Lanston Monotype Machine Company, received a Modern Pioneer Award in February.

In presenting the award to W. C. Huebner, it was said: "In a written opinion, Judge Walter G. Lindley of the District Court of the United States for the Northern District of Illinois states that William Carl Huebner 'founded a new art, or a new branch in the art of printing'." Mr. Huebner became associated with the Monotype Company as Technical Engineering Counsel on photo-mechanical equipment and processes in the summer of 1933. He makes his home in New York where he maintains Huebner Laboratories, in which new machines and processes for use in lithography and gravure are developed. He is a pioneer inventor and is responsible for many new machines and processes in use in lithography and gravure.

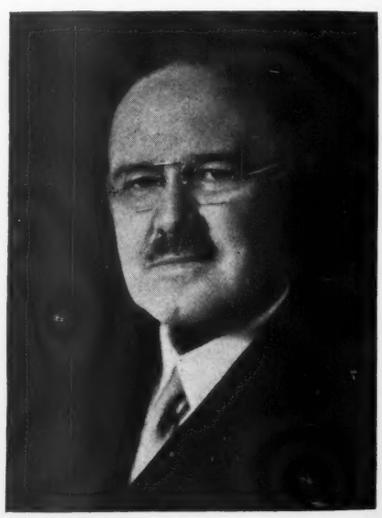


A Modern Pioneer Award was bestowed upon William Carl Huebner, Technical Engineering Counsel on Photo-Mechanical Equipment and Processes, Lanston Monotype Machine Company.

Howard M. Barber, chief engineer of C. B. Cottrell & Sons Co., Westerly, R. I., was selected recently by a committee of distinguished scientists headed by Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, to receive the special award of the National Association of Manufacturers as one of America's Modern Pioneers in the New England area, at a banquet given at the Copley Plaza Hotel in Boston.

Mr. Barber, has taken out 256 U. S. patents and 40 foreign patents. He has been with the Cottrell organization since 1891, and its chief engineer since 1902.

Chairman of the dinner and attendant ceremonies at Boston was William M. Rand, Vice-President of the Monsanto Chemical Company. A feature of the occasion was a motion picture of the activities of New England "Pioneers," including scenes made at the Cottrell plant in Westerly, R. I., showing Mr. Barber at work on his company's latest contribution to the Graphic Arts—a double five-color magazine press which prints five colors on each side of a web of paper, at the rate of 14,000 cylinder revolutions, or 28,000 20-page signatures, per hour.



Howard M. Barber, Chief Engineer, C. B. Cottrell & Sons Co., receives Modern Pioneer Award.

H. W. Prentis, Jr., president of the National Association of Manufacturers, said: "Men like you personify the pioneering spirit which has made America great and which has given this nation its leadership in science and technology."

GPO

(*Continued from Page 11*)

storage areas the system is of the dry pipe type. There is also a watchman's and fire alarm system throughout the building.

Steam, Power and Lighting

Steam for heating is obtained from the Capitol Power Plant. Electric power is furnished by the public utility at 13,200 v., 3 ph., 60 cy. frequency. Electricity for light and power in general is used at 120 v., s. ph. or 208 v., 3 ph. Printing presses operate on a 115-230 v. d. c. service which is obtained from synchronous converters located in the power plant, of which there are two 1000 and one 500 kilovolt-ampere units.

Lighting in general is of the direct type using glassteel diffusers. Proofrooms and offices on the eighth floor are fitted for indirect lighting.

Floor Layouts

The general layout of the executive offices and mechanical equipment was planned with particular reference to straight-line production so as to reduce to the minimum the amount of handling and "back-tracking" of work as it moves through the plant. Each of the eight floors in the building is laid out as follows:

Eighth Floor:

The entire eighth floor of the new building is given over to the executive offices, in which are included the Public Printer and his immediate staff, the Chief Clerk and Personnel Office, the Purchasing Division, Production Manager and Planning Division, Division of Accounts, Apprentice Section, Telephone Exchange, Library and Conference Rooms. Incoming requisitions and copy for printing and binding are delivered to the Planning Division where an estimate of cost is prepared and the jacket is written giving instructions for carrying the job through the various departments to completion.

Seventh Floor:

On the seventh floor are provided quarters for the Superintendent of Composition, the Main Proofroom, the Monotype Section and the Photo-engraving Section. The Photo-Engraving Section is a part of the generally designated Plate-Making Section.

Sixth Floor:

On the sixth floor are located the Linotype, Hand, Plating Lockup, Stereotyping, Electrotype Molding and Plating Sections, and the Metal Melting and Metal Storage Departments.

Fifth Floor:

The fifth floor contains quarters for the Superintendent of Platemaking, the Plate Finishing Section, Wood-blocking Room, the Emergency Hospital, the *Congressional Record* and the Patents Section.

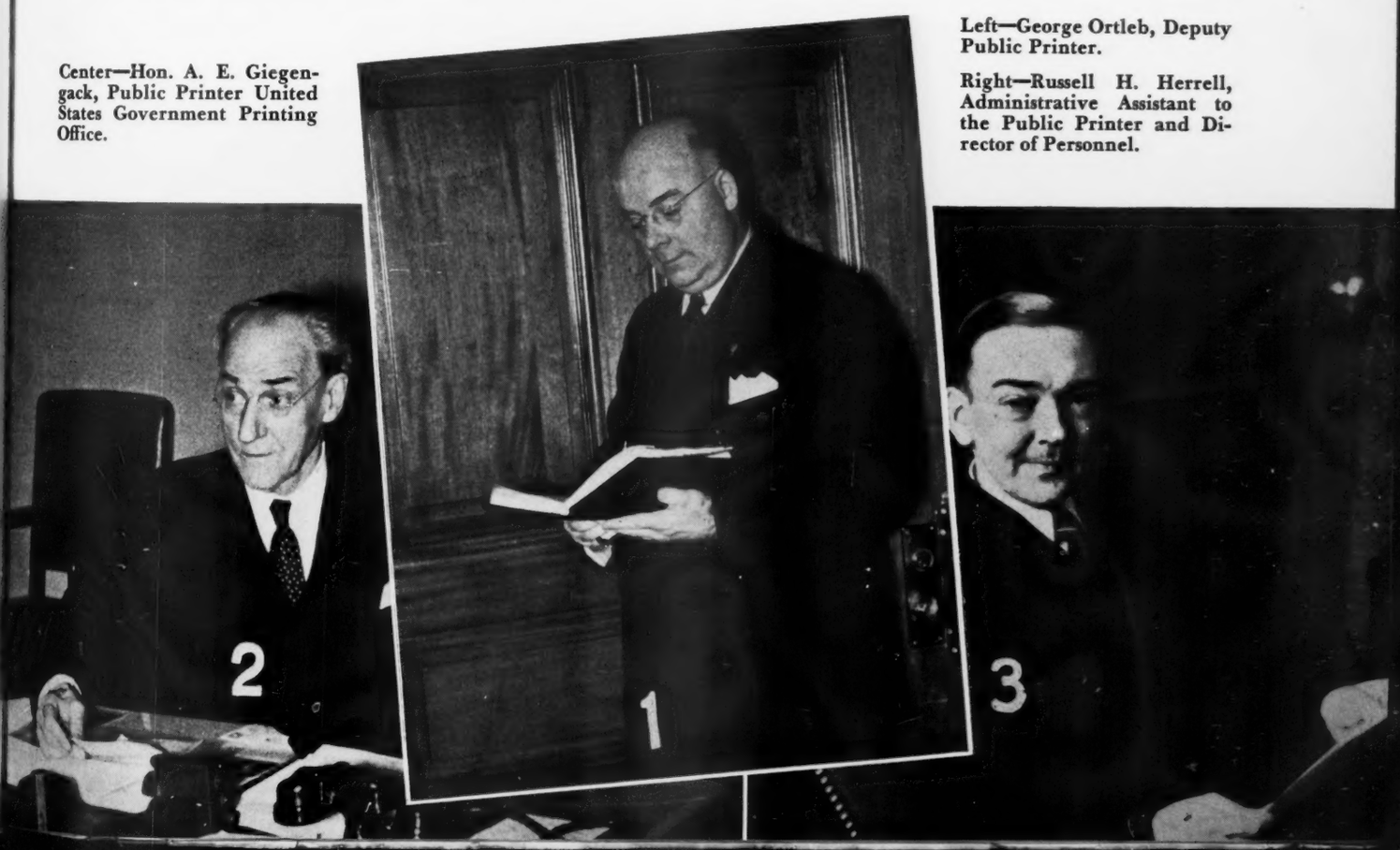
Fourth Floor:

On the fourth floor are located the Superintendent of Presswork and the Main Pressroom. The entire floor is

"BATHING" THE MACHINES

What should be of particular interest to mechanical executive readers is the statement that all of the present equipment in use in the Government Printing Office which is to be moved is given a thorough cleaning before it is erected in its designated position in the new building, corner of North Capitol and H Street N. W., Washington D. C. A large water-proof tarpaulin is spread upon the floor and the various dismantled pieces are washed and scrubbed with brushes and wiping cloths saturated with Varsol to remove all dirt and grease.

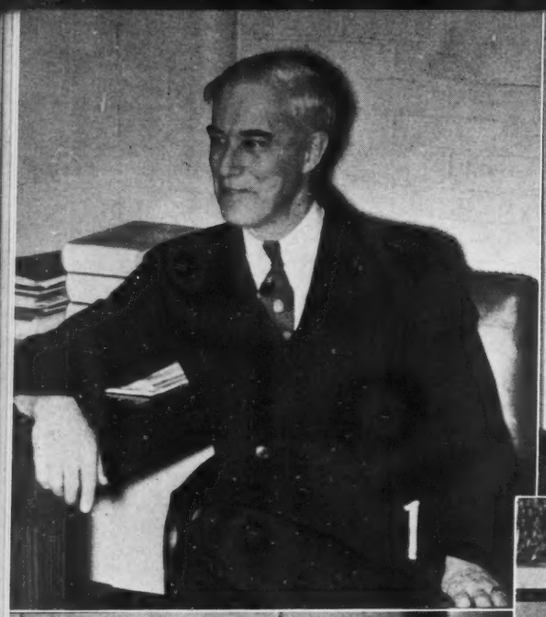
In the case of a flat-bed press, the feeder, delivery, press drive, impression cylinder and other parts are stripped off the machine to permit a thorough cleaning down and to permit moving in a semi-dismantled condition. Many of the presses were moved into the new building by enclosing the feeding mechanism in a special frame after detaching from the press. The press frame and bed are mounted upon a specially constructed truck as shown in the illustration accompanying this article.



Center—Hon. A. E. Giegengack, Public Printer United States Government Printing Office.

Left—George Ortleb, Deputy Public Printer.

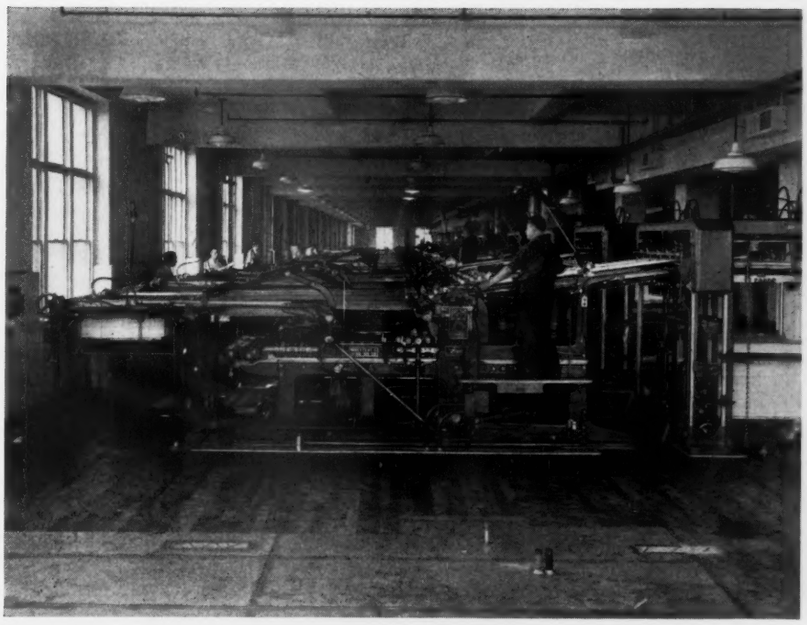
Right—Russell H. Herrell, Administrative Assistant to the Public Printer and Director of Personnel.



VARIOUS EXECUTIVES IN GOVERNMENT PRINTING OFFICE

1—Henry H. Wright, Chief Clerk
2—Edward M. Nevils, Production Manager
3—Raymond H. Lecraw, Night Production Manager
4—William Smith, Assistant Production Manager
5—Ernest E. Emerson, Director of Purchases
6—Felix E. Cristofane, Comptroller
7—Alfred E. Hanson, Mechanical Superintendent
8—Alton P. Tisdel, Superintendent of Documents
9—Morris S. Kantrowitz, Technical Director
10—J. Basil Perkins, Disbursing Clerk

Immediately above: A Group of Production Executives. (Left to Right) John A. McLean, Superintendent of Platemaking; William A. Mitchell, Superintendent of Planning; Howell K. Stephens, Superintendent of Composition; L. V. Adams, Superintendent of Presswork; Frank S. Tschida, Superintendent of Binding.



Battery of 56 in. Miehle presses, with stream feeders, all ready for service in the pressroom of the new Government Printing Office, Washington, D. C. Among the machines purchased for the new pressroom there were 12 No. 56 Miehles.

devoted to presswork. With the new machines already installed on this floor plus the present presses to be moved from the old building, the press complement will consist of approximately 84 machines of various capacities.

Third Floor:

The third floor houses the Job Composing, Job Proof and Job Pressrooms and the Plate Storage Office. More than half of the third floor space is given over to presses.

Second Floor:

On the second floor will be found the Offset Camera and Platemaking Rooms, the Offset and Tabulating Card Pressrooms, the Superintendent of Stores, the Glue Making, Roller and Roller Storage Rooms and a considerable area for paper storage.

First Floor:

The first floor will be used for Paper and Other Storage and for the Power Plant. The Power Plant includes facilities for switching and conversion of all electric power used throughout the building, air compressors, refrigerating machines, pumps, heating, ventilating and air conditioning equipment, automatic charging equipment for approximately 40 battery-operated industrial trucks for handling paper and other heavy supplies, storage batteries for emergency lighting, program bells, and various other services.

Work Flow

It will be seen from the floor allocations described above that the general flow of work through the new Government Printing Office Building No. 3 is from the top floor in the building downwardly to the pressrooms on the lower floors. Paper for the pressrooms on the fourth, third and second floors is taken from elevators which have brought that paper from the first or second floors. In case some of the paper is taken to the Offset-Lith Department on the second floor from the Paper Storage on the second floor, it is, of course, trucked to the presses.

After work has been completed in the pressroom, the printed sheets are delivered across bridges to the Binding Section on the second, third and fourth floors of old building No. 1 where necessary bindery operations are performed. The completed products are then delivered from the Bindery to the Superintendent of Documents whose department will take up several floors in the same building. In some cases, the work will be delivered directly to the various governmental agencies.

Among other devices created to facilitate production is this aligning gauge which is used in the U. S. Government Printing Office for squaring up and positioning the page plates in forms. It was developed by Deputy Public Printer George Ortleb. The page plates are aligned exactly as though the form were already in position on the bed of a press. On the side of the iron-top makeup table nearest the makeup man there are two stationary cleats which represent one side of the press bed. At the front edge of the makeup table will be noticed five clamps which are used to lock up the form just as it would be locked up on the press bed. After the chase and patent base have been locked on the table top, the makeup man starts imposition and alignment of the pages.

Horizontal alignment is secured by means of a graduated steel scale affixed to the lower edge of the beam extending across the form. Support for the beam is obtained through a gear attached to each end. Each gear meshes with a rack at either end of the makeup table. The scale is moved easily to position by grasping the beam.

To secure vertical alignment of the pages, two swinging beveled-edge steel straight-edges are pivoted upon a rod affixed to the gear housings. The rod extends from one housing to the other. Each beveled straight edge may be slid along the rod, its gauging position being determined by the graduations on the steel scale attached to the beam. When one of the swinging straight edges is let down to horizontal position, it rests immediately above the graduated crosswise straight edge which is graduated by inches and 16ths of an inch and from which readings are taken. Two canopied lights illuminate the form.

A row of 10 new Kelly No. 2 presses now in operation in the United States Government Printing Office's new Annex Building. These presses were erected before the building had been turned over to the Government in February.

The *Congressional Record* production is an exception to the route outlined above. Printing, gathering, trimming, wrapping and mailing the *Record* is completed on the fifth floor, from which a spiral chute and belt conveyor carry the publication through a tunnel to the City Postoffice.

Moving Present Equipment

Perhaps the executives of no other printing and publishing plant will be moving or have ever moved into their new plants under conditions similar to that of the Government Printing Office. While considerable mechanical equipment has been purchased for installation in the new building, yet much of the equipment now in use must be moved to the new quarters, but the moving cannot be done except during quiet governmental activity periods. As in smaller printing plant moves, production must not be halted. For instance, some of the line-composing and monotype machines and the press equipment used in printing the *Congressional Record*, cannot be moved until after Congress adjourns its present session which may be during the months of July or August—maybe later.

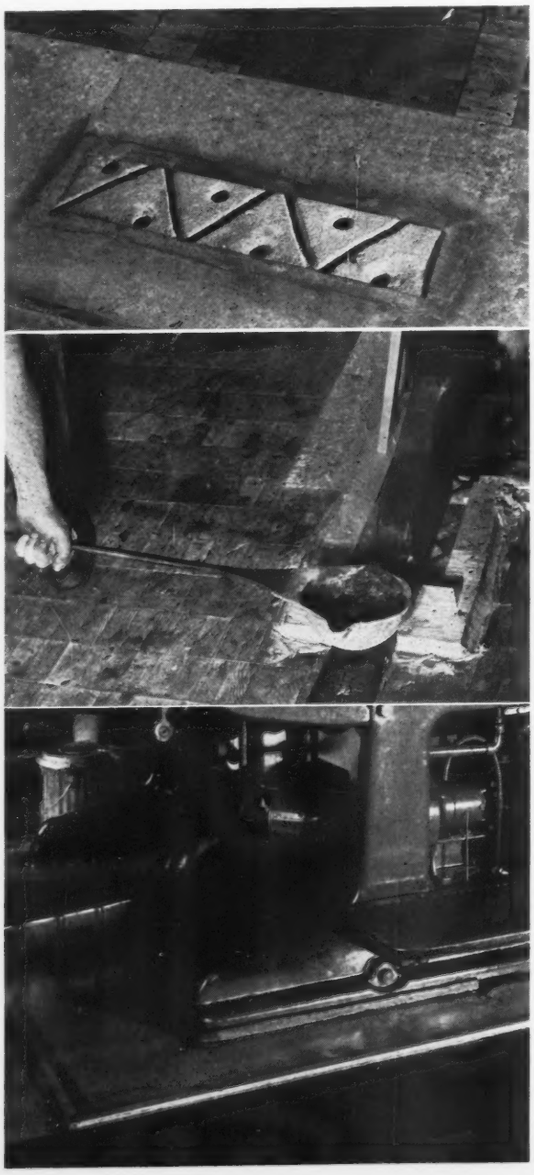
Giant Printing Production

In trying to convey to the average reader some idea about the size of the Government Printing Office, it would be easy enough to say that it is the world's largest printing plant. But such a statement wouldn't mean anything to those who have not been in the habit of reading the Public Printer's Annual Reports to Congress, nor to those who have not visited the plant while in Washington, D. C.

It is not the intention of the writer to quote an endless array of statistics and abstract figures by means of which the reader may comprehend the size of this big printing plant. Rather, we would give briefly some figures related to personnel, production and equipment.

Public Printer Giegengack and his executive personnel operate the Government Printing Office from annual money appropriations by Congress. In other words, the plant is operated on a budget, on the same principle as any going business should be operated. The total resources available to the Government Printing Office during the fiscal yead ended in 1939, including the Superintendent of Documents and appropriations and payments for work, amounted to slightly over $20,500,000.00.

The total number of employes in the Government Printing Office at the end



METHOD OF MOUNTING PRESSES IN GOVERNMENT PRINTING OFFICE—The means used for obtaining a solid and substantial press mounting is interesting. As has been stated in another part of this article, the floor load capacity of the pressroom is 400 lbs. per sq. ft. The flooring consists of 2½ in. end grain wood block flooring. At each point where a press pedestal rests upon the floor, enough blocks are removed to form an area 7½ in. by 20 in. for large presses. The cement floor is chiseled out to expose the cement. The concrete is only chipped to form a bond with the pad poured in the cavity. The cavity is then filled with concrete so that its top surface projects slightly above the floor level. Before the concrete hardens V-slots and holes as shown in the upper picture are indented in the surface of the cement. The purpose of the V-slots and holes is to provide fixation for the metal pad which will be poured on top of the block.

In the center picture in this panel, the press frame has been placed in the position it will occupy in the pressroom with the pedestals directly over the cement V-blocks. The press frame is now made perfectly level, but just at this moment it is supported by wooden blocks and shims. Wooden guard strips have been nailed to the floor about the cement block to determine the size of a metallic pad, which, after molten metal has been poured into the space provided prevent the molten metal running beyond the limits of the area determined by the wooden guard strips.

In the lower picture is shown the completed job. The press pedestal is resting upon the metal block which is being poured in the picture above. After the metal pad has been poured as explained above, the guard strips and temporary blocks supporting the press are removed. Galvanized sheet metal strips with soldered joints cover the floor area underneath the press. As will be seen, all of the outside edges of the galvanized sheet metal floor covering is edged with a ⅝ in. molding to confine oil flowing from the press bearings inside the sheet metal area so that it can be wiped up regularly. The bead or molding consists of a wooden strip, is covered with zinc which is soldered to the galvanized sheet metal to make joints oil-tight.

of the fiscal year, June 30, 1939, was slightly in excess of 5,500 people.

Almost everybody is familiar with the size and appearance of the daily *Congressional Record*, the weekly *Patent Office Gazette* and he is more or less familiar with some of the publications printed for the Executive Departments, Independent Offices, the Judiciary, and the Emergency Administrations.

For the Seventy-sixth Congress, a total of 16,263 *Record* pages were produced, or a daily average of 99 pages. Bills printed for the House and Senate totaled 21,927. There was a total of 3235 editions of House and Senate reports and documents. The total number of pages of House and Senate hearings was 93,703.

To demonstrate the extreme production flexibility of the Government Printing Office, the Public Printer in his 1939 report stated that on one night the House Appropriations Committee set 2224 folios of copy on one hearing. This made 786 pages of type and nearly 9500 page proofs were required, but proofs were delivered next morning.

Composing Division

Government Printing Office production must be thought of in big figures. Otherwise it is almost impossible for one to grasp the magnitude of the work performed. It is easy to say that 152 Linotype, 23 Intertype and 2 Ludlow line-casting machines and 130 Monotype casting and 100 Monotype keyboards are operated in the composing division, but when one is told that 2,169,470,000 ems of composition were set and made up by the Linotype and Monotype sections of the gigantic composing room, he realizes somewhat more clearly just how much work must pass through the Government Printing Office. Of the total ems composition given above, 1,164,655,000 were set and cast on slug-casting machines and 1,004,815,000 were Monotype composition. Nearly 1,000,000 folios of copy were prepared and read by the Proof Section *excluding* congressional, patent office and Library of Congress work. The Hand Section of the composing room imposed and sent to press 57,634 forms for the printing of document work.

Platemaking Division

During the fiscal year 1939, the Platemaking Division produced 15,126,270 sq. in. of plates. Each class of plate is divided as follows: Electrotypes, 6,037,986 sq. in.; stereotype plates, 4,961,637 sq. in.; stereotype (mats only) 982,274 sq. in.; rubber plates and stamps, 56,162 sq. in.; photo-engravings, 828,459 sq. in., and offset-lith negatives, 2,259,752 sq. in.

Photo-engraving Department

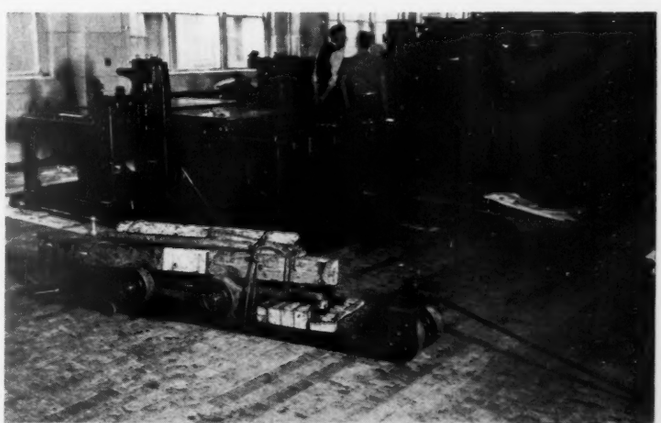
Following the general trend in the printing industry, the Public Printer reports that the use of illustrations in Government printing is increasing. Since 1932, the production of combination photo-engravings has increased steadily to reach 51,838 sq. in. for the fiscal year 1939. Halftone production fluctuated from 143,000 sq. in. in 1930 to 75,000 sq. in. in 1934 and to 186,000 sq. in. in 1939. The production of zinc etchings was 590,000 sq. in. in 1939. An interesting evolution in skill, methods and machinery and in the co-operation of employees is illustrated in the 10-year comparison of photo-engraving referred to above. In the year 1930, 19 men worked 48 hours a week to produce 669,000 sq. in. of plates. During 1939, 23 men worked 40 hours a week (a total increase of but 8 man-hours per week) to produce 828,459 sq. in.

Battery of Major Miller printing presses in action in Government Printing Office pressroom on third floor of new building.

Two Miller Simplex presses which have been installed in pressroom of new building for Government Printing Office, Washington, D. C.

Offset-Lith Department

Continuing the Public Printer's discussion concerning the trend toward increasing use of illustration during the



In upper picture foreground are dolly and truck used in moving Miehle presses from the old to the new quarters in the Government Printing Office pressroom. Press has been stripped for moving purposes.

In lower picture, the 56 in. Miehle press has arrived safely at its new destination. The feeder trussed up in a special frame (shown in another picture) has been moved with the press The gentleman on the truck at right has pushed the press along to its new position.

last 10 years, in 1930 there were 333,332 sq. in. of negatives produced in the offset-lith department. Says the Public Printer, "The remarkable production for the past fiscal year of 2,259,752 sq. in. emphasizes that the offset process, from the standpoint of economy, efficiency and quality is adapted to certain kinds of governmental printing, due in large part to the perfection of offset machinery."

A new M-H camera and special equipment has been installed in GPO's Offset-Lith Platemaking department.

The offset printing press equipment consists of 6 presses, 2 more just ordered. The printing capacity of these presses has been increased by replacing two small and old presses with two large-size Harris offset presses of the same general nature.

Bindery Division

Mention has been made previously in this article about the necessity for flexibility in handling the production work for the various Governmental departments. As in other departments, production flexibility is imperative in the Bindery Division. An order which arouses annual interest and concern is the Yearbook of the Department of Agriculture. This year the book consisted of 252,260 copies of 39 double signatures, making a volume approx. 2 in. thick and containing 1232 pages. To prevent interference with the normal flow of work, a new production plan was followed this year. The order was handled in blocks of 50,000 copies each and was maintained from one operation to another in blocks without interfering with normal production and yet permitted delivery earlier than was anticipated.

An illustration of the production of large rush orders consists of the binding of 110,618 volumes of Income Tax Regulations within 8 one-shift days from the time it reached the gathering stage.

One of the economies effected in departmental operation during the past year consists of the employment of a flexible-shaft machine for cleaning book cases after they have been stamped. Normal production by hand work was approximately 50 cases per hour. With the aid of the newly-developed machine, a production of over 175 cases per hour has been achieved with an improvement in the quality of work.

Press Division

Probably the most impressive single section in the Government Printing Office is the Press Division, where 188 presses are used in regular production work. The presses consist of a variety of makes and kinds and range from 10 in. by 18 in. platen automatics to a goodly number of flat-bed machines. The rotary presses range from small Post envelope to the large Hoe web presses upon which are printed the *Congressional Record*, the *Patent Office Gazette* and other publications. There are, too, the offset-lith printing presses and three special Harris presses and one Special Hoe press used exclusively for printing postcards. Three new Kidder rotary presses especially constructed for printing money order blanks upon safety paper were installed recently in the new Warehouse Building.*

One billion, one hundred and fifty-five million, five hundred and three thousand, one hundred forty-eight impressions is a lot of impressions, you'll admit. And it takes a lot of presses to produce that many impressions in a year's time. The Public Printer states that's how many impressions were made on GPO's presses for the 1939 fiscal year. He states further that it was necessary to increase the force in order to operate the presses 24 hours a day. Now that production will be carried on in new quarters before long with considerable new press equipment, production conditions will be ameliorated greatly.

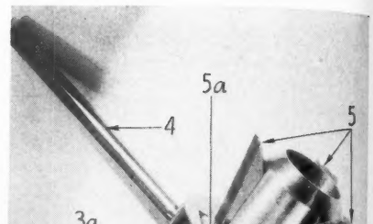
The number of job jackets handled by the Press Division was 61,902. Postal cards printed for the Postoffice Department numbered 2,136,042,180 and the number of money orders printed was 261,804,697.

With particular reference to the Press Division of the Government Printing Office, it will be remembered that mention was made in the Public Printer's 1938 Report to the review of press equipment for the purpose of determining the most economical means of production, so that a definite program might be developed for the replacement of press equipment when such replacements are warranted. Many of the presses have been used for more than 20 years, and others have become obsolete through the introduction during the past 10 years of faster and more flexible presses.

At the time this article was being prepared, 37 new presses had been or were being installed in the Press Division of the new building. These were as follows:

12 Miehle No. 56 presses
1 Miehle two-color No. 46 press
2 Miehle No. 3½A presses
7 Miehle No. 46 presses
3 Miller 28x41 presses
2 Miller 20x26 presses
9 ATF Kelly No. 2 presses
1 Four-unit Kidder web press

*See June, 1938 issue of *Printing Equipment Engineer*.



The Ortleb Expanding Paper Roll Chuck, developed by Deputy Public Printer George Ortleb, is used in the Government Printing Office for centering roll stock on the presses. Practically all roll stock comes to the Office with 3 in. cores. The chuck, or "expansion bung" as it may be called alternatively, is designed on the principal of a lathe chuck except that it works in reverse order by spreading the three fingers of jaws apart when the adjusting nut is screwed upwardly. Printing executives familiar with irregularities in shipment-flattened rolls, etc., will recognize the positive "grip" exerted by this particular chuck.

Without giving too involved an explanation we will refer to the accompanying illustration briefly to explain how the chuck functions: The body or shell is indicated at 1 and 1; the clamp ring is indicated at 2 (this ring supports the pivoted fingers or jaws 5 at 5a; the rotatable adjusting nut is indicated at 3; the pin 4 is inserted in one of the six nut holes one of which is indicated at 3a; the nut 3 is threaded upon a similar threaded 10 pitch portion of the body 1; screwing the nut 3 upwardly expands fingers 5, and unscrewing them releases the grip of the jaws from the paper roll core.

REVERSING PROCEDURE IMPROVES PROOF READING QUALITY

An important improvement adopted in the Government Printing Office and reported by the Public Printer has increased the quality of proofreading. The larger part of governmental work heretofore was first read with the assistance of a copy-holder and followed by silent reading. By reversing this procedure, at the suggestion of the foreman of the Proof Section, and having the silent reading performed first, the reader is better able to detect errors in general instructions, typographical lapses, wrong fonts, etc. Upon second reading, with copy, the reader is not required to interrupt the copy holder nor to divert his own attention from copy comparison for the marking of typographical errors, machine faults and similar corrections.

Million Dollar Annual Newsprint Waste Saving

ALMOST unusual and valuable accomplishment is revealed by General Manager Cranston Williams of the American Newspaper Publishers Association in an Association Bulletin recently sent to member papers. Through means of a long-range program of tabulating newsprint waste figures submitted by member papers, the A.N.P.A. Mechanical Department of which W. E. Wines is manager, keeps members informed from time to time of the progress they are making in conserving newsprint by reducing waste to the lowest possible figure.

In General Manager Williams' Bulletin this saving during 1939 is approximately 32,333 tons in 165 member offices reporting (50% of total A.N.P.A. membership) as compared with the conditions existing when the first newsprint waste report was published by the Mechanical Department in April 1927.

Below is a partial reprint of the Bulletin report:

"The table below compares the percentages in the current bulletin with those in the first newsprint waste report (April 1927). In each case the percentages given in the table are the simple averages of the percentages shown in the respective bulletins.

WASTE REDUCTION, IN PERCENTAGES OF CONSUMPTION

Clas	First Report, 1927	Fourth Quarter, 1939	Reduction
Class A*.....	4.33	2.32	2.01
Class B*.....	3.94	2.51	1.43
Class C*.....	4.32	2.67	1.65
Class D*.....	4.35	2.54	1.81

"It is interesting to see how much this reduction figures in money. Of course, it is not possible to arrive at exact figures, but an estimate can be made which will be at least approximately correct.

"In order to do this, the consumption figures for the 165 offices reporting in the current bulletin were obtained from the reports and then totalled. This was done for each class separately. The total consumption for the year 1939 was found to be, in round figures, 1,860,000 tons.

"The percentage of reduction for each class was then applied to the 1939 consumption in that class, and another total obtained. This shows that the paper saved during 1939 approximates 32,333 tons. This is the estimated saving effected by the 165 offices reporting—as compared with the conditions existing in 1927.

"Assuming, now, that the waste paper is sold at an average price of $10 a ton, or 50c a hundred, which is a liberal estimate, the net cost of this waste to the publishers is $40 a ton figured on the delivered zone price in New York, N. Y. If we apply this figure to the 32,333 tons estimated as saved, the money value is found to be $1,293,300. This is a surprising result, but it is believed that the method of arriving at this figure is fair and reasonable, and that the final figure is conservative rather than exaggerated."

*EDITOR'S NOTE—For the benefit of our readers whose firms are not members of the American Newspaper Publishers Association, the member papers reporting newsprint waste figures to the A.N.P.A. Mechanical Department are divided into four groups. Class A is comprised of those member papers having under 1000 tons yearly newsprint consumption; Class B is comprised of papers using from 1000 to 5000 tons yearly; Class C those papers using from 5000 to 20,000 tons, and Class D composed of member papers whose newsprint consumption is over 20,000 tons yearly.

EXECUTIVE ¶s

T. D. King, formerly Composing Room Superintendent of the Memphis *Commercial Appeal* has been appointed mechanical superintendent of the Alabama *Journal*, Montgomery, Ala.

Harold C. Berg has taken over the position of Assistant Director of Production at the News-Journal Company, Wilmington, Del., in place of R. M. Megginson who passed away in December.

A. E. Baasch is the new General Superintendent of the Magill-Weinsheimer Company, Chicago. W. H. Roberts is no longer connected with that organization.

William Baumrucker, Jr., formerly with the New York *Daily News*, is now Business Manager of Publications Research, Inc., New York.

Timothy J. Sullivan, who has been chief machinist at the *Wall Street Journal*, New York, for the past 48 years died December 10 of a heart attack. David J. O'Connell is now in charge.

Jack M. Welsch, general plant superintendent of the California State Printing Office, died last December 9, of injuries received when struck by an automobile the day before. His successor as General Superintendent is Harry K. Orman.

L. V. Adams has succeeded Bert E. Bair (deceased) as Superintendent of Presswork, Government Printing Office, Washington, D. C.

John A. Rogers of J. M. Huber, Inc., passed away on Friday, February 9.

Frank Smith, 69, mechanical superintendent of the *Philadelphia Evening Bulletin* passed away Feb. 28. He held a number of patents, including the original one on the application of rubber rollers to high-speed rotary newspaper presses.

Gene Kelly, president of Kelly Metal Corporation, New York, passed away after a brief illness on Feb. 8. Mr. Kelly was a well known manufacturer of type metals and had been associated with the printing industry for 25 years.

John A. Burke, production manager of Gannett Newspapers, underwent a delicate eye operation at St. Peter's Hospital, Albany, N. Y. in February.

Walter Masters, 50, Production Manager, Los Angeles *Times* from 1934 to 1937, died Jan. 21 at Palm Springs, Cal. He will be remembered as holding similar positions during his career at the Chicago *Herald-Examiner*. The Kansas City *Journal-Post* and the St. Louis *Times*.

Henry D. Bradley, formerly general manager of the Bridgeport (Conn.) *Times-Star*, has been appointed publisher of the St. Joseph (Mo.) *News-Press & Gazette*.

Gordon Elrod, formerly Production Manager of the Kansas City (Mo.) *Journal*, has recently been appointed Southern Manager of the Ludlow Typograph Company with headquarters at the Atlanta office.

Frackelton Passes

Robert J. Frackelton, President of the Chandler & Price Co., one of the largest printing press manufacturers in the world, passed away on February 10 at Hanna House, Lakeside Hospital. Immediate cause of death was coronary thrombosis. He was 71 years of age. He had been president of Chandler & Price since 1912, having begun his career with the company as secretary-treasurer in 1895.

The company has manufactured more than 100,000 presses which have been shipped to all parts of the world, besides many paper cutting machines.

Having no children of their own, Mr. and Mrs. Frackelton took a great interest in helping boys and girls to a higher education. These benevolences extended over a 30 year period.

Reviews T. & H. Calendar

Thatcher Nelson, president of the advertising firm of Henry A. Loudon, was selected by the Boston Club of Printing House Craftsmen to review the 1940 edition of the famous Tileston & Hollingsworth calendar. Annual reviews of this calendar have been given by prominent people in the printing industry during the last 15 years.

Conference Dates Changed

It has been announced by President Francis M. Britton of the New England Newspaper Mechanical Conference that the dates for the fall New England Conference have been changed from October 12-14 to October 19-21. The remainder of the arrangements stand as announced previously.

The By-Laws Committee headed by Chairman R. M. Fitzgerald, met in Boston on February 13 and drafted a set of laws which will be presented to the Board of Directors at a meeting to be held some time this spring. If the Board approves the laws, they will be presented at the October meeting for approval by the members.

Western Div. SNPA Newspaper Mechanical Conference

AMAZING strides in the development of Southern pine as a newsprint supply for the future highlighted the second annual Southern Newspaper Mechanical Conference of the Western Division held here at the Baker Hotel, Feb. 19 and 20.

More than 300 delegates from seven states listened to experienced pressmen tell of the exceptional tensile strength of the paper, how the finish which was at first slightly rough is being improved and how there are remarkably few web breaks from the paper now being produced at the Southland Paper Mills near Lufkin, Texas.

"The paper mill is still experimenting with the product," said R. W. Wortham, Jr., sales manager of the plant, in a talk before the conference. "Newsprint to be turned out later will have a better finish."

Chief fault found with the newsprint, delegates said, was its lack of finish requiring large quantities of ink. Mr. Wortham promised that this fault would be corrected right away. All agreed it was strong enough, even stronger than some of the best paper from Canadian mills.

Representatives of newspapers reporting on the use of the paper included the Dallas *News*, Fort Worth *Star-Telegram*, Little Rock *Gazette*, Shreveport *Times*, Waco *News-Tribune* and Houston *Post*.

General sentiment at the conference among delegates was that they approved the new development as a long stride forward in the industry and welcomed the chance to use the paper. The plant at Lufkin has been in operation only since late in January.

Another interesting topic discussed at the conference was the use of perfumed inks on newsprint. Ralph Mawbey of Chicago, representing an ink manufacturer, showed the conference a clipping of the Minneapolis *Tribune* of Dec. 12 still bearing a faint scent.

"This department store ad sold out all the store's perfume by noon," Mawbey said. "It's a good form of advertising if not overdone. There's always the danger of too strong a mixture making a disagreeable instead of a pleasant odor."

The advertiser selected the perfume and decided how strong he wanted it where scented ink has been used so far. Apple blossom scent was used in a Tulsa advertisement.

R. A. Torrans of Shreveport suggested that if the people want scented newspapers it could be sprayed on the papers while it is running through the press.

Ink manufacturers doing research work are seeking ways of preventing ink from rubbing off on readers' hands, Mawbey said. Most of the trouble occurs on picture pages, which are heavily inked and handled much by readers, he said.

A. E. Tabb of the casualty division, State Department of Insurance, discussed accident control, stressing pre-

1 — The Alltone process is being discussed at the Dallas SNPA Western Div. Conference, by J. H. Gibson (center) Superintendent of Rotogravure and Engraving Departments of the Houston Chronicle and new Chairman of the Mechanical Conference; C. W. Tabb, Secretary of the Conference (left) and O. M. Harper, Mechanical Superintendent of the Tulsa (Okla.) World (right).

2 — L. A. Sengele (extreme left) of the Express News in San Antonio, just got off a good story when the candid camera snapped this picture. Others in the picture, left to right, are J. M. Sedberry, Enterprise-Journal, Beaumont; R. J. Bunkerley and A. J. Tenger, Caller-Times, Corpus Christi; C. A. Moore, Times-Record, Fort Smith, Ark., and J. M. Lighett, Enterprise-Journal, Beaumont.

3 — The new Executive Committee of the SNPA Western Div. Mechanical Conference is shown in this picture. Top row (left to right) are Leven Deputy, Dallas News; F. J. Williamson, San Antonio Express News; J. H. Gibson, Houston Chronicle, the new chairman; W. J. Phillips, Oklahoma City Oklahoman and Times; J. M. Lighett, Beaumont Enterprise & Journal. Bottom row (left to right), R. J. Crawford, Shreveport Times; A. T. Blease, Corpus Christi Caller-Times; Bert Conner, Fort Smith (Ark.) Times-Record and O. M. Harper, Tulsa World.

4 — It was strictly water served to these delegates at the Dallas Newspaper Mechanical Conference. Shown in the picture sitting before the water glasses at which Sam'l Bingham's Son Mfg. Co. was host, are (left to right): E. G. Arnold and E. B. Naylor, Monroe (La.) News Star World; M. E. Rada, Goss Printing Press Company; K. G. Breedlove, Imperial Type Metal Company; Cecil Coop, News Record, Miami, Okla.; Van McKee, Linotype Parts Corporation; Frank S. Barr, George H. Morrill Company; W. H. Hunn, Sam'l Bingham's Son Mfg. Co.; W. K. Maxwell, Dallas News; John Masterson, George H. Morrill Company; Joe Bedell, Dallas News; Josef Wilson, Morley Mat Co.

FORWARD STEPS

Six and a half years ago, when Lanston Monotype Machine Company began the manufacture of plate-making equipment for use in offset printing and color lithography, it was determined to make the best machines that sound technical counsel, engineering skill and precision methods of manufacture could produce.

With the advice of William C. Huebner (pioneer inventor and, without question, the foremost technical adviser in the lithographic industry) and under the supervision of Mauritz C. Indahl (with the Engineering Department at Monotype for more than forty years and for the past twenty-six years its Chief Engineer), to put this policy into effect Monotype has spent more than half a million dollars in engineering and development work alone.

We have felt there would be a market for equipment which contributed to facility of operation, economy of production and improvement in quality of offset printing and color lithography. Results furnish ample proof that new machines designed and built by well-known Monotype precision methods of manufacture are generally accepted by the trade as worthy contributions to the advancement of the art.

Type cast on Monotype machines for both text and hand composition is generally recognized to provide the best printing surface for making reproduction proofs and transparent proofs direct from type, and is so used by outstanding typographers, printers and lithographers. Its uniform height, clear and sharp printing surface, the ability to vary the space between letters, with all new type for each job, are important factors which virtually dictate its use in type work for lithography, offset and gravure. Some Monotype faces are especially designed for these uses.

In providing new and improved machines and devices, and in making available faces especially adapted for printing and advertising and for reproduction, Monotype has made substantial contributions to the upbuilding of the printing industry.

We believe that letter-press printers considering the installation of equipment for offset printing or color lithography will find it to their advantage to confer with us before purchasing. Machines and processes bearing the "Monotype" trade-mark are the best that competent engineers can design, skilled workmen can make* AND MONEY CAN BUY. *Send for our catalog of Monotype-Huebner Plate-Making Equipments.

LANSTON MONOTYPE MACHINE COMPANY

TWENTY-FOURTH AND LOCUST STREETS • PHILADELPHIA, PENNA.

vention as a means of reducing premiums.

One of the most abused individuals on a newspaper is the staff photographer, J. H. Gibson, Houston, said in his talk. The photographer must be alert, use intelligence on all occasions and take pictures under all conditions.

"The people are picture mad," he said. "They are looking for good pictures, well printed. If we don't furnish what they want, advertising will be taken to other mediums. Papers have been folding up all over the country, due mostly to lack of intelligence on the part of persons engaged in the newspaper business."

Forcing publishers to attend the conference each year in order to gain more knowledge of the mechanical problems was suggested in a round-table discussion of pressroom difficulties led by I. D. Price, Ardmore, Okla.

Attendance at the conference was greater than last year with better than 300 delegates registered, C. W. Tabb, secretary of the conference, reported. The majority were from Texas, Arkansas, Louisiana and Oklahoma, but New Mexico, Kansas, Tennessee were represented.

The executive committee of the conference was increased from seven to nine members with three to retire each year in the future. J. H. Gibson, Rotogravure and Engraving Superintendent of the Houston *Chronicle* was named the new chairman, succeeding A. I. Lundberg of the Fort Worth *Star-Telegram*. Others on the committee include: Leven Deputy, Dallas *News;* F. J. Williamson, San Antonio *Express News;* W. J. Phillips, Oklahoma City *Oklahoman & Times;* J. M. Lighett, Beaumont *Enterprise & Journal;* R. J. Crawford, Shreveport *Times;* A. T. Blease, Corpus Christi *Caller Times;* Bert Conner, Fort Smith (Ark.) *Times Record;* O. M. Harper, Tulsa *World* and C. W. Tabb, secretary, S. N. P. A., Dallas. This committee will meet in November to consider the place of the next meeting.

One of the highlights of the conference was the dinner February 19 when supply men were hosts to the delegates at the Baker Hotel. E. M. (Ted) Dealey, president of the Dallas *News* and past president of the Southern Newspaper Publishers Association, presided. William McCraw, former Attorney General of Texas, was the principal speaker. His talk in a humorous vein, kidded the various crafts of the printing field.

Exhibits from the various supply houses occupied a large portion of space in the convention hall. There were twenty-nine firms represented as well as two educational exhibits, the Alltone process and the radio edition of the WFAA-Dallas News facsimile newspaper. The receiving apparatus of the facsimile newspaper was on display and the Sunday edition of the paper had a lead story on the conference as well as a picture of Chairman A. I. Lundberg.

There was variety in the exhibits, including engraving supplies, printers rollers, metals, matrix papers, saws, miterers and tabulators.

The following firms had exhibits at the S.N.P.A. Mechanical Conference in Dallas, Texas: All-Tone Process, Bingham, Sam'l Son Mfg. Co., Burgess Cellulose Co., Chemco Photoproducts Co., Continental Oil Co., Federated Metals Div. American Smelting & Refining Co., Goss Printing Press Co., Hammond Machinery Bldrs., Inc., Harper-Standard Engineer Co., Hi-Speed Roller, Imperial Type Metal Co., Lake Erie Engineering Corp., Lanston Monotype Co., Linotype Parts Co., Ludlow Typograph Co., Milwaukee Saw Trimmer Corp., Monomelt Co., Inc., Morrill, G. H. Co., National Lead Co., Pitman, Harold M. Co., Rapid Roller Co., Rouse, H. B. & Co., Sullebarger, E. T. Co., Superior Roller Co., San Antonio Roller Works, Tingue Brown & Co., United American Metals Corp., Universal Monotabular Co., Wallin Manufacturing Co.

Celebrates One Hundredth Anniversary

THE Geo. H. Morrill Company is celebrating the one hundredth anniversary of its existence. The business was started in 1840 when Samuel Morrill began the manufacture of printing inks in the kitchen of his Colonial home in Andover, Mass. It is said that the Company now is the largest manufacturer of newspaper printing inks, its capacity being 150,000 lbs. daily.

To mark the Centennial of its progress, the Geo. H. Morrill Company announces to the printing and lithographing fields a unique merchandising plan in the publication of a series of seven specialized ink books. The books are titled as follows: *Morr-Glos Label Inks*, *Offset Inks*, *Sil-Vor-Plate* (metallic inks), *Morr-Glos Corrugated and Fibre-Board Inks*, *Halftone Blacks and Process Colors*, *Morr-Glos Carton Inks*, and *Cotton and Burlap Inks*.

The inks shown in the books are exhibited on specific stocks for specific presses and types of products. "With these books," it is stated, "the printer will be able to solve his color problems on a practical basis, referring to the ink specimens which make use of his own materials — specimens that were printed under the regular conditions of his own shop and by printers of his own calibre." Each ink is identified as to its resistance to sunlight, alcohol, alkali, heat, paraffin, and the like.

Geo. H. Morrill Co. publishes seven specialized ink books —two shown here in miniature.

President Becker Reports

Under date of March 1, President Neal Dow Becker submitted the twenty-fourth annual report to the stockholders of Intertype Corporation. Operations of Intertype Corporation, its domestic subsidiaries and Intertype Limited (wholly-owned British subsidiary) for the year 1939 resulted in a net profit of $122,-632.75. This is equivalent to 55c per share on the 221,740 outstanding shares of common capital stock outstanding.

Because of European conditions, the Corporation's export business for the year declined 22% from 1938. "Fortunately," states President Becker, "the decline in our billings to foreign countries was offset by increased billings in the domestic market." This is in contrast with the beginning of the depression in 1929 when Intertype's foreign business acted as a stabilizer. In one year 55% of the Corporation's entire production was sold abroad.

President Becker calls attention to the domestic market by stating that "the past few years have been characterized by an appalling mortality in important newspapers through consolidations or suspensions . . . Elimination of the weaker newspapers in some communities has greatly strengthened the surviving competitors so that the survivors have been in a position to embark upon programs of plant modernization which long had been deferred."

Conference Discussion Centers On Pertinent Teachers' Problems

Under the symposium plan, instructors in printing will discuss pertinent problems directly related to their daily work at the 19th Annual Conference on Printing Education, sponsored by the National Graphic Arts Education Guild June 30, July 1, 2, and 3 at the Rochester Athenaeum and Mechanics Institute, Rochester, New York.

Questions to be taken up by members of the Guild and their guests are now in the hands of the teachers.

For Today's Plant

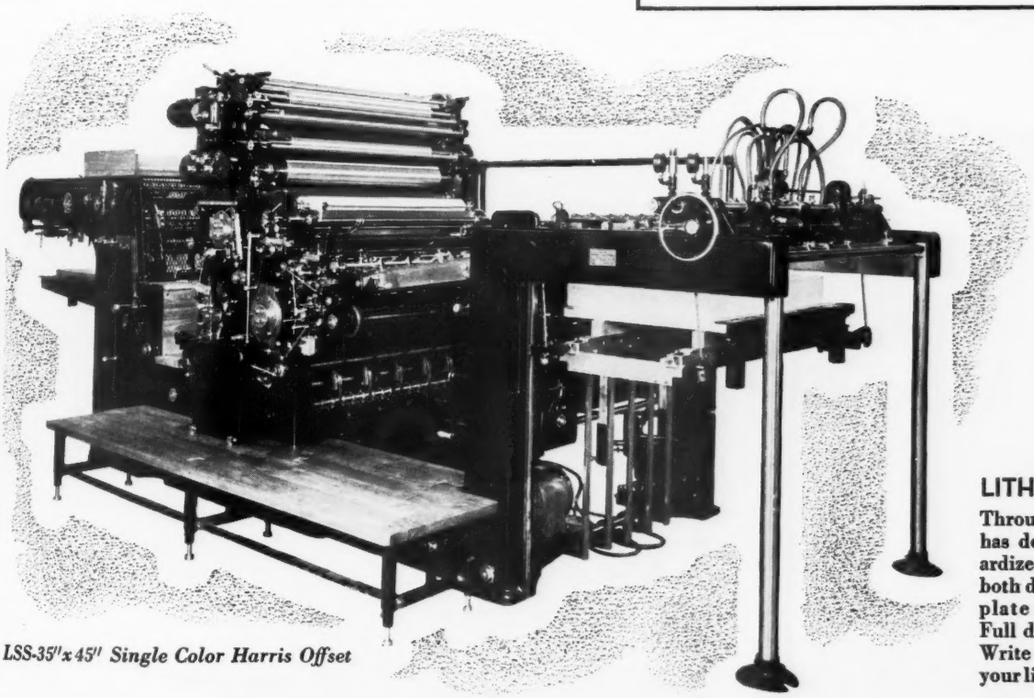
Nothing but the Best is Profitable

To Produce the Best in Offset you must have Modern Equipment

Whenever offset is produced with LESS profit than is possible with a modern Harris Press, then the difference must be figured as LOSS.

Harris Presses are engineered and built to give that maximum profit—a profit possible with equipment built by the pioneer builders of successful offset presses. In today's plant only the best is good enough for maximum profits. Harris—the press of modern business—is acclaimed for this reason.

For Offset Profits you need the Harris—
To get these Profits—Call on Harris



LSS-35"x45" Single Color Harris Offset

HARRIS LITHO-CHEMICALS

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problem.

• HARRIS • SEYBOLD • POTTER • COMPANY •

General Offices: 4510 East 71st Street, Cleveland, Ohio. *Harris Sales Offices:* New York—330 West 42nd Street; Chicago—343 South Dearborn Street; Dayton—819 Washington Street; Atlanta—(Harris-Seybold Sales Corp.) 120 Spring Street, N. W.; San Francisco—420 Market Street. *Factories:* Cleveland, Dayton.

ELECTRIC HEAT *as applied to customer's requirements for making stereotype color plates — Data given for controlling plate dimension and clear printing face.*

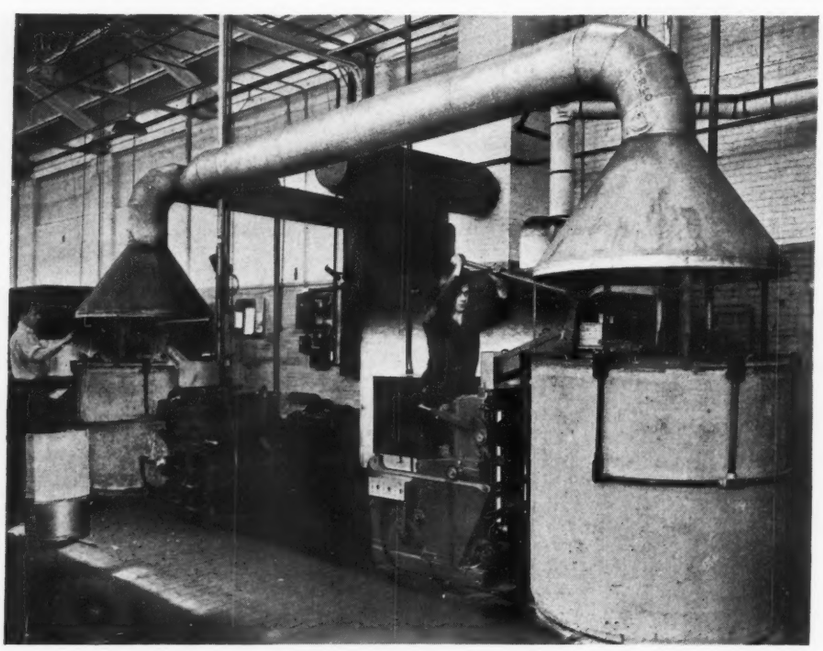
By JOHN HOWELL, Jr.*

**Buffalo Niagara Electric Corp. Abstract of paper entered in General Electric's 1939 Industrial Heating Contest.*

IMPROVEMENT in the quality and uniformity of stereotype plates through proper application of electric power has been the experience of the Greater Buffalo Press, Inc., Buffalo, N. Y. The firm is engaged in the printing of Sunday comic and magazine sections for newspapers in this country and Mexico. Not only has the company improved upon its product, but repairs, replacements and failures in the equipment itself have been practically non-existent. The color printing firm first gave consideration to electrical stereotype melting in 1936. The company's business was increasing; an order for a new high-speed color press was about to be placed and plans were being made to move the business into new and more commodious quarters.

The customer requested that we make a study and prepare an estimate of cost involved in converting its 4000 lb. capacity, externally-fired fuel-type furnace to electric heat and also of the cost of operation. The customer checked our estimates and recommendations and found they met his needs satisfactorily.

On the basis of the preliminary estimate the customer requested a further estimate and recommendations for electrical equipment for a new 4500 lb. capacity furnace which was eventually installed. Specifications on this furnace called for a hemispherical pot 18 in. radius. The weight of plates as cast including the tail was 47 lbs. It was estimated that an average of 75 plates per day would be cast and that the maximum number cast in any given hour would be 12. Casting operations were to be carried on 12 hours a day, 30 days a month, at a temperature specified as 650 deg. F. and the furnace was to be maintained at a standby temperature of 450 deg. the remaining 12 hours each day.

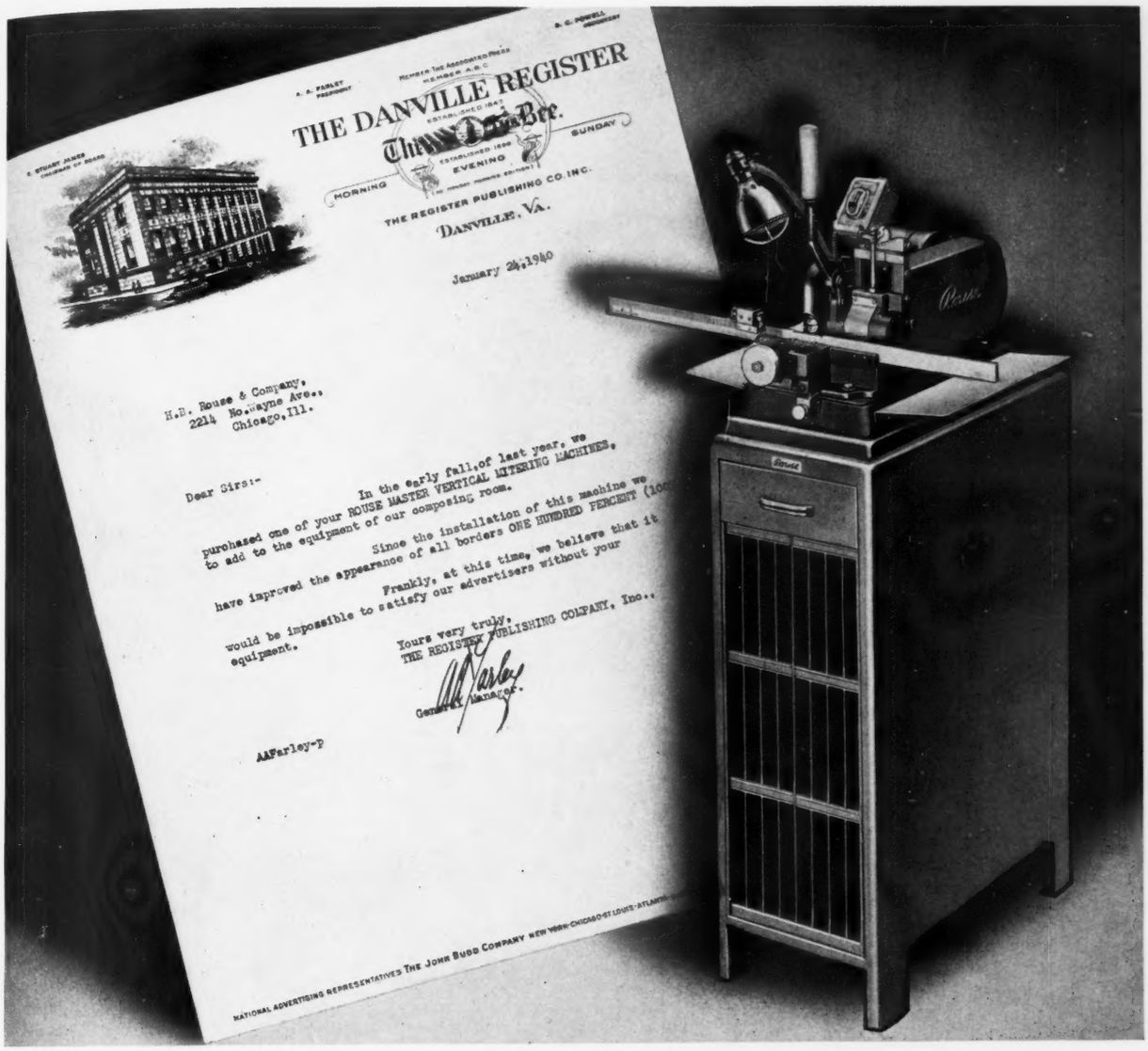


View of stereotype newspaper color plate making foundry in plant of Greater Buffalo Press, Inc. Note snap switches with pilot lights controlling heaters in front, back and the side sticks of the casting box. Close examination of the box reveals the temperature indicating thermometer. The flexible conduit containing leads to back heaters and the flexible asbestos covered lead to one of the side sticks next to its wooden knob handle are visible.

To compensate for radiation losses and meet maximum casting requirements, it was estimated that 12 to 15 k.w. of capacity would be required. In order to allow for increased production and a reasonably short time to melt down a pot full of metal from a cold start should this be necessary it was deemed advisable to plan on installing considerably more capacity than this. A 120-208 v., 3 ph., 4-wire distribution system was to be used in the plant and it was decided that 6 heating units rated 5 k.w. on 230 v. which would consume 4 k.w. on 208 v. or a total of 24 k.w. would be the best possible solution. The customer selected General Electric heating units. This would be sufficient to heat the metal to operating temperature from standby in about 1 hour and would melt down a pot full of metal from cold and heat to operating temperature in about 4 hours. It would provide a balanced 3 ph. load and as the customer wanted to be able to limit his stereotype demand it allowed for connecting the heaters to two balanced 3 ph. circuits, each equipped with a 3-pole double-throw switch with a Y-delta connection to the heating elements. With this electrical connection power input could be manually limited to 4, 8, 12, 16 or 24 k.w. by throwing the switches to give various combinations of Y and delta connections on the two circuits or not using one circuit at all and still maintain an even distribution of heat in the furnace. To do this, the heating units were to be evenly spaced around the circumference of the pot starting as close as possible to each side of the pump and alternate units were to be connected to the same Y-delta switch. A standard indicating 3-wire temperature control instrument with an adjustable setting of 200-900 deg. and a standard temperature limiting device set at 750 deg. to prevent overheating were recommended. A 3 pole 90 amp. automatic control panel to make and break the circuit as heat was called for was specified. In each case General Electric equipment was installed.

An interesting part of the installation is the heating of the pump spout which was to be transposed from the fuel fired furnace. The spout is of an unusual fan shaped design, 24 in. long with flat bottom and sides, spreading from a width of 4½ in. near the neck to 10 in. near the mouth, with a removable, flat cover. Six 400 w. high temperature sheath strip heaters 18 in. long, totaling 2400 w., were recommended to heat this spout. Four heaters were to be clamped to the flat bottom and one to each side. The heaters were to be connected in series with a "midget" thermostat having an adjustable range of 500-700 deg. The sensitive bulb was to be clamped in contact with the bottom of the spout near its center. It was anticipated this would insure delivery of the molten metal to

(*Continued on Page 36*)


THE DANVILLE REGISTER
MORNING
EVENING
SUNDAY
THE REGISTER PUBLISHING CO. INC.
DANVILLE, VA.
January 24, 1940
H.B. Rouse & Company,
2214 No. Wayne Ave.,
Chicago, Ill.
Dear Sirs:-
In the early fall of last year, we purchased one of your ROUSE MASTER VERTICAL MITERING MACHINES, to add to the equipment of our composing room.
Since the installation of this machine we have improved the appearance of all borders ONE HUNDRED PERCENT (100
Frankly, at this time, we believe that it would be impossible to satisfy our advertisers without your equipment.
Yours very truly,
THE REGISTER PUBLISHING COMPANY, Inc.,
General Manager.
AAFarley-p
NATIONAL ADVERTISING REPRESENTATIVES THE JOHN BUDD COMPANY

IMPOSSIBLE TO *Satisfy Advertisers* WITHOUT *Rouse* VERTICAL ROTARY MITERER

Such is the statement from Mr. A. A. Farley, general manager of the Danville Register. He says, "Since the installation of this machine (Rouse Vertical Rotary Miterer) we have improved the appearance of all borders ONE HUNDRED PERCENT (100%).

"Frankly, at this time, we believe that it would be impossible to satisfy our advertisers without your equipment."

Exact joining corners are essential to neat boxes and borders. They can be produced at the rate of more than 1000 an hour, direct from strips, on the Rouse Vertical Miterer. Rules from hairline to 24 point full face may be mitered perfectly. A special model miters rule up to 36 points thick.

Where page costs are important and good appearance is necessary the Rouse Vertical Rotary Miterer is essential equipment.

There are Rouse Vertical Miterers for large and small plants. Complete information on the various models will be sent at your request.

H. B. ROUSE & COMPANY

2216 NORTH WAYNE AVENUE, CHICAGO, ILLINOIS

Printing Equipment and Supplies

Mercury Bench TrimOsaw

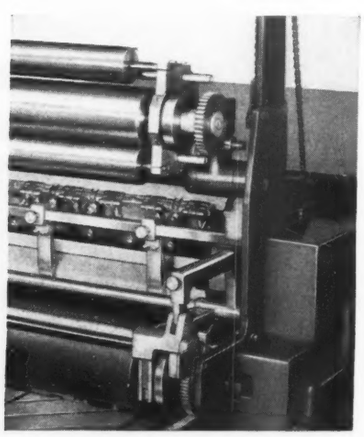
Hammond has announced a new bench TrimOsaw. It has been christened the "Mercury." In the new saw are incorporated many of the Glider TrimOsaw's exclusive features, including the Micrometer Gauge, Single - Action Clamp, Ball-Bearing Saw Arbor and Miter. With these Glider features, it saws with precision. For ease and speed of operation, the Micrometer Gauge rolls on roller bearings.

The new Bench Mercury TrimOsaw will saw a slug as short as 8 points and a plate as large as full newspaper page size. In addition to sawing and trimming of slugs, the new Bench Mercury will do every other sawing operation including inside mortising, outside mortising, undercutting, rabbeting, and mitering. Mitering of 16 borders at a time may be done.

Syncro Inker

For several years Vandercook & Sons have been experimenting in an attempt to eliminate inking troubles due to a variance in timing between the inking rollers and the form. For ideal printing conditions, form rollers should be timed perfectly with the form, so accurately that there is no slip or drag on the form.

To determine whether the Form Rollers on a particular press were being driven at the correct speed a very sensitive Gauge was developed. By placing this Gauge on the Bed of a press and running the Form Rollers over the Gauge, it is possible to determine immediately how much faster or slower the Form Rollers should be driven.



View of the Vandercook Proof Press Syncro Inker synchronizing mechanism on a proof press, by means of which it is possible to cause the form rollers to be timed perfectly with the form so there will be no slip or drag of the rollers on the form. Synthetic form rollers with practically no tack can be driven at correct speed to produce clean, sharp inking.

The Vandercook Syncro Inker, it is claimed, makes it possible to produce the finest printing with rather hard synthetic rubber Form Rollers. The Inker does not rely partially on the Form to drive the Form Rollers. Therefore, fine printing can be done with Form Rollers that have practically no tack. Plates are less apt to fill up, and cleaner printing will always be produced when the Form Rollers are traveling at the correct speed.

There is nothing for the operator to adjust on the Vandercook Syncro Inker. Synthetic Rubber Form Rollers are supplied with steel driving trucks of the correct diameter. In addition to the drive supplied by the driving trucks at each end of the Form Rollers, the large Rider traveling between the Form Rollers is gear-driven. The Form Rollers are carried on ball bearings to reduce friction.

For photo-engravers, states manufacturer, the Vandercook Syncro Inker gives a *standardized* inking condition regardless of temperature changes and proofs produced with the Syncro Inker can be matched by the pressman on a production press.

Complete information on the Vandercook Syncro Inker, may be obtained by writing Vandercook & Sons direct, or in care of *Printing Equipment Engineer*.

Complete Remelt Unit

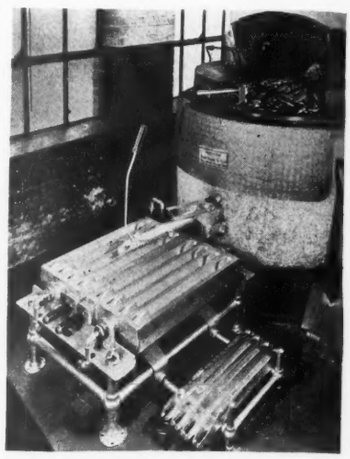
One of the reasons the remelting room in a printing plant has never been much of a show place may be that it has been neglected in the past. But with the recent introduction of improved melting and casting equipment the remelt department in printing plants is now coming into its own.

The latest device for the remelt room is the United American Casting Trough which in its construction is a wide departure from the tin gutter heretofore generally used. This new casting trough permits continuous casting and strains out the dross into a reservoir before the molten metal reaches the mold and so prevents the pig from casting drossy. After the pot is emptied, the reservoir is lifted out and the dross dumped.

The control handle shown at the lower end of the casting trough in the illustration moves the trough from one cavity to the next. As the trough is being moved, the flow of metal is instantly stopped until it reaches the next cavity when the flow is just as instantly released. The United American Casting Trough operates with the pot valve continuously open until the entire row of cavities in the mold are filled. This reduces considerably the time required for casting and likewise lowers fuel costs.

The United American Casting Trough is adapted only to the bottom-pour pot, but where the pot is not constructed for bottom pouring and the furnace is otherwise in good condition, the pot can be replaced with bottom-pour attachment and equipped with a leak-proof valve.

The mold shown in the illustration completes the remelt unit. It is the twin-type water-cooled 16-cavity mold to which the casting trough is especially adapted. It casts the Double-ear Slip-off ingot and is equipped with cradles which gather the ingots as they come down the slide. The cradle also serves as silencers by preventing the noise occasioned when the ingots fall to the floor and are especially desirable when the remelt room is on an upper floor.



View of composing machine remelting equipment fitted with United American Casting Trough which permits filling all mold cavities in the rack with one opening of the pot valve.

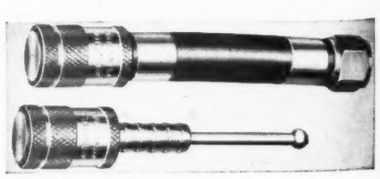
Readers who wish more information may secure it from United American Metals Corporation direct or through *Printing Equipment Engineer*.

Paper Roll Spray

American Publishers Supply states the Air-O-Chek Valve for spraying the ends of newsprint rolls is made to precision standards from bar brass and stainless steel so there will be no rusting or corrosion of the tool or its parts.

The Air-O-Chek Valve actuating lever is enclosed in the valve itself and in the hose to which it is attached and is con-

(*Continued on Page 30*)

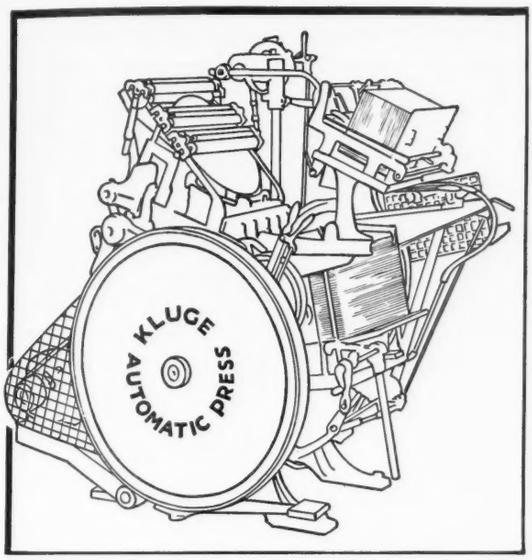


Air-O-Chek Valve which is attached to a hose for spraying the ends of newsprint rolls with water.

Increase YOUR MARKET

WITH A WIDER VARIETY OF PRINTING

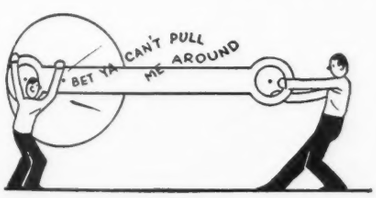
How can you produce a greater variety of printing without an investment in additional equipment and a corresponding increase in your overhead?



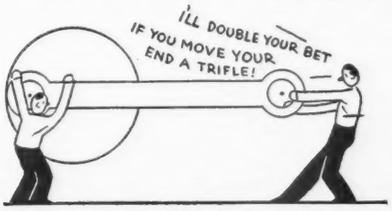
● You can do it by replacing obsolete job equipment with the Kluge automatic platen press designed and built especially to meet the varied requirements of today's printing. The new Kluge Automatic Press will produce the widest range of work efficiently and economically, thus broadening your market.

The heart of the versatility of the new Kluge Automatic Press is the patented stationary backshaft which produces an absolutely "rigid impression". It is this "rigid impression" that makes the new Kluge Automatic Press a unique platen press capable of producing perfect halftone and color work as well as improving the quality on "run of the mine" jobs. **Increase your market, and your profits, with the new Kluge Automatic Press.**

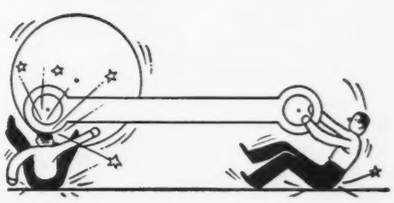
THE SECRET OF KLUGE "RIGID IMPRESSION"



Kluge Stationary Backshaft—When the backshaft is held stationary with the eccentric on dead center, as on the Kluge Automatic Press, it is impossible to twist it on impression no matter how much force is applied.



The Oscillating Backshaft of the ordinary platen press frequently yields, or twists, on impression because it hasn't reached dead center when impression starts. This necessitates more make-ready in the form of



"Squeeze" which in turn increases the yield in the backshaft. Thus, it is extremely difficult, if not impossible, to print a better class of work satisfactorily on a platen press with an old style oscillating backshaft.

Ask for the new booklet explaining Kluge "Rigid Impression"

BRANDTJEN & KLUGE · INC.

MANUFACTURERS · SAINT PAUL, MINNESOTA

BRANCHES IN BOSTON · NEW YORK · PHILADELPHIA · CHICAGO · ATLANTA · DETROIT
ST. LOUIS · SAN FRANCISCO · DALLAS · LOS ANGELES · MINNEAPOLIS · CANADA: SEARS, LTD.

View of Hess & Barker's color rotary letterpress with hydraulic rewind.

EQUIPMENT

(*Continued from Page 28*)

nected to the valve by a ball and socket joint. Flexing the hose slightly in any direction opens the valve. When the hose is released, the valve closes instantly. All working parts are enclosed in the valve and the hose.

Maintenance is claimed to be negligible. All working parts may be freed by unscrewing the valve head.

Air-O-Chek Valves, it is claimed, will not leak since water pressure makes the seal — the greater the pressure the tighter the seal. There are no packing glands to leak.

Further information may be secured from American Publishers Supply direct, or through *Printing Equipment Engineer*.

Color Rotary Letterpress With Hydraulic Rewinder

Hess & Barker have announced a rotary letterpress for printing upon a wide variety of stock. One of the features of the press is a hydraulic rewind device which maintains even web tension without dancing rollers or friction devices. The press is designed to print from one to four colors in hairline register, but provision is made for adding additional units for printing two additional colors. Operating speed of the press is in excess of 600 ft. surface speed per min., the speed being limited by the condition and type of ink and paper.

The length of print per cylinder revolution ranges from 22 in. to 29 in. in ½ in. steps. This is accomplished by changing plate and impression cylinders. When a set of cylinders is changed there are no adjustments, the center-to-center distance being maintained by a special pair of bearing boxes supplied each size impression cylinder. One gear change synchronizes the ink fountain with cylinder speed.

Paper may enter the press as two separate webs running side by side and taken from two 30 in. diam. mill rolls with automatic tension control, or the paper may enter as a single web up to maximum 30 in. width.

Pulsations of web tension, manufacturer states, is eliminated by a special slot and reel bar arrangement which provides minimum opening blanket slot in the cylinder so as to provide for practically continuous print around the cylinder.

A large gear with a specially developed tooth-form meshes with the plate cylinder gears. The latter may be moved axially a slight distance to take up backlash, even after years of service.

Ink fountains have a 15 lb. black-ink capacity. Ink flow is infinitely adjustable from zero to maximum without stopping the press. Roller marks on long solid areas are prevented because the three form rollers are of two different sizes.

After leaving the last impression cylinder, the printed paper passes through a dryer, mounted above the press.

After the paper has passed through the dryer, it may be slit by passing it through a rotary shear-cut slitter, and thence to two hydraulically-driven rewind mandrels which, manufacturer states, insure uniform web tension as the roll increases in diameter from 7½ in. at the start of the run to a maximum diameter of 30 in.

The hydraulic rewind consists of a hydraulic pump unit mounted at the delivery end of the press. The pump unit is driven by suitable means contained within the press and a hydraulic motor unit drives the rewind mandrel. The two units are connected by tubing which carries the fluid under pressure to operate the hydraulic motors.

The hydraulic motors are of the variable stroke type. The stroke is varied by an attachment which increases the stroke as the mandrel speed is reduced with a resulting increase in torque and uniform web tension.

The press is driven by a variable speed slip-ring motor through a V-belt drive.

Overall length of the press with dryer and double rewind measure 29 ft.

For rigidity, the main side frames of the press are made of Meehanite iron castings 3½ in. thick at the planed surfaces and 3 in. thick at unplaned cross-section.

The press may be supplied to deliver cut sheets and folded work with the elimination of the rewind device described above.

Insulation Chambers Added

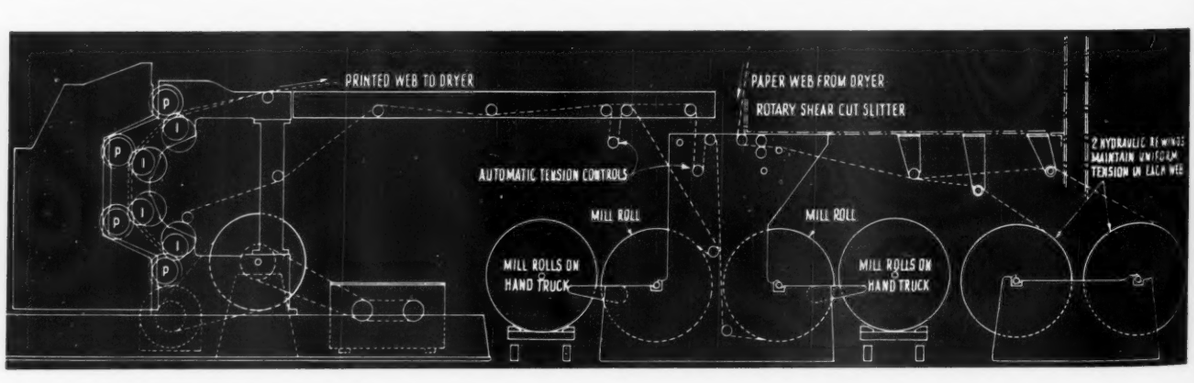
American Evatype Corporation announces that it has further modified the design of its Precision Molding and Vulcanizing Presses by adding platen insulation chambers to provide cool presses with hot platens. This condition has been brought about by installing specially constructed insulation chambers between the heating platens and the body of the presses to reduce heat loss to the minimum. Officials of the Corporation claim this to be an exclusive feature.

(*Continued on Page 52*)

Announce Appointments

Brandtjen and Kluge, Inc., announces the appointment of S. M. Strother as Western Sales Manager. Mr. Strother will headquarter in Los Angeles, California from where he will direct the sales for the western branches of Brandtjen and Kluge, Inc.

A. E. Bradley who has been Western Sales Manager for Brandtjen and Kluge, Inc. is now Eastern Sales Manager. He will headquarter at the home office and factory at Saint Paul, Minnesota.


PRINTED WEB TO DRYER
PAPER WEB FROM DRYER
ROTARY SHEAR CUT SLITTER
AUTOMATIC TENSION CONTROLS
MILL ROLL
MILL ROLL
MILL ROLLS ON HAND TRUCK
MILL ROLLS ON HAND TRUCK
2 HYDRAULIC REWINDS MAINTAIN UNIFORM TENSION ON EACH WEB

Paper Problems

By LETTER P. OFFGRAV*

Standardizing Papers

I would like to know why they don't standardize some of the papers made and do away with about 50% of the brands made.

STANDARDIZING papers and doing away with half of the brands are two different things. As a matter of fact, papers are fairly well standardized into grades, considerable progress having been made on this in the last few years. However, paper quality is rather an intangible factor and there are different qualities in the same grade of paper from different localities, even though the price may be the same.

Brands are manufacturer's identification marks of their products and there is not and should not be a limitation on them. Anything else would be a limitation of trade and consequent lessened competition. The only way to cut down the number of brands would be for some authority to tell certain mills that they could no longer brand their papers, although at the same time the said authority would be allowing other mills to continue the use of their brands. This is obviously unfair and unworkable.

**Another in a series in response to problems propounded by mechanical and production executives in a questionnaire sent out by* Printing Equipment Engineer. *Mr. Offgrav will reply to additional problems in future issues.*

P.N.P.A. Newspaper Mechanical Conference

PROGRAMS for the four sessions of the Pennsylvania Newspaper Publishers' Association's Mechanical Conference, to be held at the Penn-Harris Hotel, Harrisburg, April 8 and 9, have been completed by the committee headed by Howard J. Lamade, Williamsport *Grit*.

Progress in Printing during the past 500 years, the theme of the conference, will be discussed by Frederick B. Heitkamp, Vice President, American Type Founders, at the Tuesday luncheon meeting.

Four sessions have been planned to cover the four departments of newspaper making. Each will be opened with addresses by technical experts with time being devoted to asking questions and discussions of prepared topics.

A composing room Quiz has been arranged with C. P. Merkle, Composing Room Superintendent, Washington (D. C.) *Star*, propounding questions, and R. D. Shaeff, Monotype Chief Mechanical Inspector, supplying answers.

News Ink of Today will be the subject of an address by W. T. Diefenbach, Chief Chemist, J. M. Huber, Inc. H. Howard Colehower, Jr., Godfrey Roller Company, will explain some of the technical problems of high-speed printing.

Stereotyping will be discussed by Jack Kearns, Burgess Cellulose Company. A. M. R. Charrington, Jr. (North American Smelting Company) will speak on *Type Metals*.

All foremen will be interested in Peter J. Burton's explanation of *Economical Methods of Producing Food Store Advertising*. Mr. Burton is a special representative for Mergenthaler Linotype Co.

The Photo-Engraving Session, under the direction of Don Miller, Allentown *Morning Call* and *Evening Chronicle*, will present several unusual features.

Color Combinations Liked Best By People

Many interesting facts, reports the Color Research Laboratory of the Eagle Printing Ink Co., Division General Printing Ink Corporation, on the likes and dislikes of people for various color combinations have recently been determined. In a general way, the Laboratory Reports, people like color combinations of two types: (1) Those based on analogous colors, and (2) Those based on contrasting colors.

Color combinations which do not involve hues either analogous or complementary seem to lack appeal. This would mean that effects showing predominately blue tones, or green tones, or red tones, are effective. Combinations like red and blue-green, yellow and ultramarine, orange and peacock, yellow-green and purple, are good.

Bad schemes seem to be found in combinations like red and yellow, green and blue, red and purple, yellow and green. The science back of this data is purely psychological and based on extensive research among people.

Edison Edition on Peach Paper

On Monday, February 5, the Port Huron *Times-Herald* consisted of 48 pages printed throughout on peach colored paper. The edition was in celebration of the Edison Day program which was observed in Port Huron on Saturday, February 10. The general makeup of the paper and press work are excellent. Strike-through and show-through are absent because of the opacity of the paper.

Kemp Appoints Abrahamson

The C. M. Kemp Manufacturing Company, Baltimore, Md., announces the appointment of E. W. Abrahamson, Room 623, Graybar Building, 420 Lexington Avenue, New York, N. Y., as representative for metropolitan New York and Northern New Jersey.

Rotex Pump Bulletin

A bulletin (R-400) announcing a new line of pulseless discharge Rotex Pumps with helical gear rotors, in sizes under 3 in. for capacity requirements from 5 to 100 gal. per min., is available from the Quimby Pump Company or through *Printing Equipment Engineer*. Pumps are used for handling viscous or thin liquids.

Workings of New Printing Processes are Relentless

ONCE upon a time, King Canute reigned in such a way that he became a very powerful king, and he developed a complex whereby he thought his power was unlimited. As a test, he commanded the tide to recede. The tide did not recede. If the time for making this test had been a few hours earlier, or later, things would have been different. These remarks were made by F. W. C. French, Lanston Monotype Machine Co.'s Research Director, recently in Cleveland, by way of illustrating that when letterpress printers consider the offset printing process, they should anticipate the movement of the tide and swing along with it.

New processes may not seem to affect us, but their workings are relentless. We may ignore these new processes, only to find that shortly our viewpoints are hopelessly obsolete and we are engulfed by the tide.

In all the years, there hasn't been a piece of printing that couldn't be executed by letterpress. This is still true today; but some letterpress plants are not equipped to produce certain kinds of work as advantageously as they can be produced by some other process.

Competition makes things obsolete, because it is dynamic, and not static. Competition is severe. For example, during the last years radio has been coming up; the money going into radio comes out of the advertising dollar. A few years ago, advertisers wanted a little more "class" in their newspaper advertising; newspapers wouldn't supply the demand, so ad shops sprang into existence to supply the business that should have gone to the trade compositor, had he been alert. Metropolitan newspapers have been crowding out the small weekly papers.

The danger from competition by a new process lies in its gradual effect. Your loss of volume may be 5% today, 10% tomorrow, 25% the next day — then you wake up.

Many kinds of work which are being done by offset are non-competitive because they come from developing new markets.

The speaker warned: "If you don't buy quality in offset equipment you are buying headaches. You should buy precision." He illustrated the point by relating how one superintendent contrived a homemade apparatus for rotating a circular camera screen. The loss in production time soon ate up the difference in the original purchase price of standard equipment.

Answering a question, it was said that no photo-typesetting machine such as the Hunter or the Uhertype is being operated in this country. A photo-typesetting machine cannot be said to be successful until it can produce work at less cost per page, and "trade-in" the hot metal machines now in use.

Again in an answer, the origin of the word photo-*composing* was assigned to the orderly or artistic arrangement of printing images, and not to the use of the word as meaning typesetting. Strictly, the machine is step-and-repeat, and as such no confusion exists.

Matrix Developments

Futura Light with Oblique in the 6 and 14 point sizes, Rex Italic in the 10 point size, and 18 point Cairo Medium with 24 point Cairo Medium Condensed are among Intertype's newest cuttings. Examples are shown below:

THIS PARAGRAPH is composed on the Intertype in the six point size of Intertype Futura Light, made in combination with *Futura Light Oblique* 12345678

6 Point Futura Light with Oblique

THIS paragraph is set in 14 point size of Intertype Futura Light *with Oblique* 1234567

14 Point Futura Light with Oblique

This Paragraph set in 10 point Intertype Rex Italic 123456789

10 Point Rex Italic (duplexed with Rex)

ABC abcdefgh 123
ABC abcdefgh 123

18 Point Cairo Medium with
24 Point Cairo Medium Condensed

Wrenches in Printing Plants

By W. F. SCHAPHORST

SEVERAL times I have seen the "kink" in print which shows how to make a wrench longer by "slipping a gas pipe over." It is a very simple procedure and it may look and sound good to some printers, but I don't believe in making a wrench longer in order to put nuts on tighter.

As you doubtless have observed, wrenches for small nuts are invariably short; for medium nuts, medium in length; and for large nuts, they are long. The manufacturers therefore seem to have some "system" in making wrench lengths, and they have. The pitch of the thread is considered, the cross-sectional area of the bolt at the bottom of the threads is considered, and the strength of the average man who does the tightening is also considered.

To make a wrench "twice as long" you therefore increase the tension on the bolts to twice the amount, the force of pull on the wrench being the same. By increasing wrench lengths, I have frequently actually "stretched" bolts until they broke in two, or I stopped turning as soon as I felt the bolt begin to stretch. This is poor practice, and I do not do it any more. I do not increase the wrench's length any more because I realize that the elastic limit of a bolt should never be reached.

If you feel like making a wrench longer for "unscrewing" a nut — all right. But don't make it longer for tightening; you may ruin some valuable machine part and may even cause a serious accident.

Why not find out for yourself?

More and more Stereotypers are discovering what a surprising difference the new FLEX ALL-AMERICAN dry mat can make. Halftones come through clear and brilliant; type stays crisp and clean. Heavy solids print smoother, and use less ink.

YOU CAN TRY THEM FREE

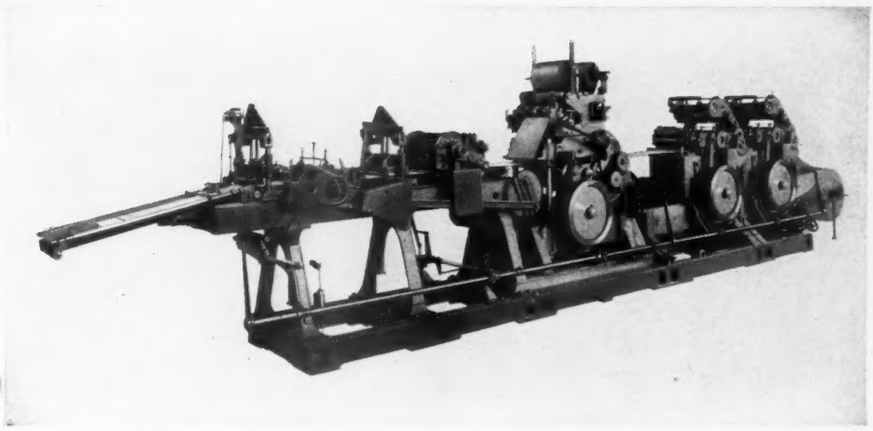
No cost, no obligation. Just write your name and address on the margin of this ad — and the gauge, shrink, and type of casting equipment you use — and mail to

FLEXIDEAL DRY MAT CORPORATION
21 West Street, New York

FLEX
All-American
DRY MATS

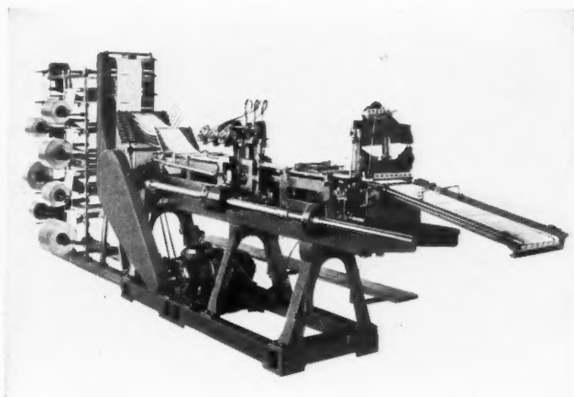
Consult P-Double-E Index

LARGE PROFITS for YOU in specialty printing



9 x 12 New Era Press, equipped to print two colors on one side of sheet and one color on the other side, and to number, punch, perforate, slit, cut off, and deliver by conveyor belt.

WORK that the average printer can't touch—tickets, labels, tags, match-book covers, register forms, etc.—you can handle easily with a NEW ERA Flat-Bed Web Press... and at 7500 multi-color sheets per hour! Available in six sizes, from 6 x 6 to 13 x 38, the NEW ERA press delivers a *finished* product—sheeted, rewound, or zig-zag folded, as required. Attachments can be provided for slitting, punching, perforating, cutting, scoring, numbering, and for reinforcing and eyeletting tags—all in one operation. Write for particulars, samples of work.



NEW ERA

FLAT-BED WEB PRESSES

NEW ERA MANUFACTURING COMPANY

375-A ELEVENTH AVENUE PATERSON, N. J.

New Era Collator, equipped to handle 13 webs (7 paper and 6 carbon webs shown), and to wire staple and cut off in lengths from 4 to 11 inches. Can be equipped to gum, cross perforate, punch, slit, and zig-zag fold, in fold-lengths to 11 inches.

Iowa Conference Will Stress Photo-Engraving Reproduction

Executives of Iowa Newspaper Mechanical Conference — Left to right: Guy Chappell, Mechanical Superintendent of the Iowa City (Ia.) Press-Citizen is president; Charles H. Bleuer, of the Davenport (Ia.) Democrat, is vice president; A. P. Ashton, of the Sioux City Journal is chairman of the engraving session and also of the entertainment committee; Paul Kamler, of the Clinton Herald is secretary-treasurer.

PLANS for the fourteenth annual Iowa Daily Newspaper Mechanical Conference, to be held this year on Sunday, Monday, and Tuesday, May 19-21 at Sioux City, Iowa, are being arranged by Guy J. Chappell of the Iowa City *Press-Citizen*, president of the conference.

The conference is composed of newspaper composing room executives, machinists in charge of composing machines, press, stereotype and photo-engraving executives of the middlewest.

The Iowa conference is a state organization but executives from plants in surrounding states will participate. Last year, executives from Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Wyoming, Colorado, Kansas, Missouri and Ohio were in attendance. All mechanical executives in the midwest are invited to attend.

Headquarters for the conference will be Hotel Martin at Sioux City where all sessions will be held. Registration will take place Sunday, May 19, and activities for wives, including a tour of the city; a golf tourney and a tour for delegates, are being arranged.

Executives of the two daily newspapers published at Sioux City, the *Journal* and the *Tribune*, will act as hosts to the conference.

Representatives of equipment companies will take part in the program. Displays of machinery and supplies will again be one of the conference features.

Both general sessions and group meetings will be held. It is planned to have prominent speakers address the meeting on topics that are of importance in producing better printed papers. Topics proposed by mechanical men themselves will be discussed in round table sessions.

The increasing use of illustrations by newspapers has intensified photo-engraving problems and reproduction of cuts and it is planned to place additional emphasis on this rapidly growing development at this year's conference. Officers state that it is the plan of the conference to have its engraving session grow and expand along with the other departments of the conference.

Chairman for the composing room round table will be Charles H. "Tod" Bleuer, composing room superintendent of the Davenport *Democrat* and Vice President of the conference. A. P. Ashton, Sioux City *Journal*, engraving department, will serve as chairman of the engraving session and also as chairman of the Sioux City delegation in charge of entertainment. Earl Caldwell, stereotype superintendent, Sioux Falls (S. D.), *Argus-Leader*, will be chairman of the press and stereotype round table session.

The officers of the Iowa conference are: President, Guy J. Chappell, Iowa City *Press-Citizen*; Vice-President, Charles H. Bleuer, Davenport *Democrat*, and secretary and treasurer, Paul Kamler, Clinton *Herald*.

EMPLOYMENT AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

PRODUCTION MANAGER — With large Eastern concern now discontinuing business is open for engagement anywhere in U. S. A.; 45 years old, christian, understands costs, buying and production in all departments. Also conversant with production of continuous office forms. Highest references. Reply Box No. 84.

PRINTING INSTRUCTOR — Wants position as mechanical superintendent. Have newspaper idea sure circulation builder. Want to work for progressive publisher. Understand economy in production. Young, educated and know how to handle men. Reply Box No. 85.

YOUNG MAN—Wants opportunity to advance, willing to learn new ways of production; all-around training, capable in composing room and pressroom. Graduate of professional printing school. Reply Box No. 86.

Bunn Elected

Benjamin F. Bunn has been elected Vice President of The George H. Morrill Co., Div. General Printing Ink Corp. Mr. Bunn will continue also to function as Eastern Manager of The George H. Morrill Co., Div.

★ When PMC saw the splendid possibilities semi-steel offered to metal mounting bases, it immediately adopted it for PMC STERLING TOGGLE Bases as positive insurance against "growing" and warping. This, plus speedy lock-up, a 50% saving in make-ready — precision register — make PMC STERLING TOGGLE BASES a sound and economical investment. Write for bulletin describing this plate mounting system in detail.

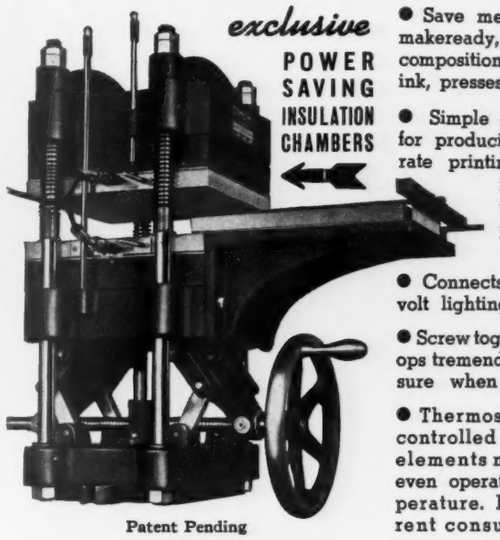
"WARNOCK" 4 by 4 METAL BLOCKS — "STERLING" TOGGLE BASES

THE PRINTING MACHINERY COMPANY
436 COMMERCIAL SQUARE · · · · CINCINNATI · OHIO

23 E. 26th St., New York City — 608 S. Dearborn, Chicago

MAKE YOUR OWN RUBBER PRINTING PLATES

(Economize on Duplicates)



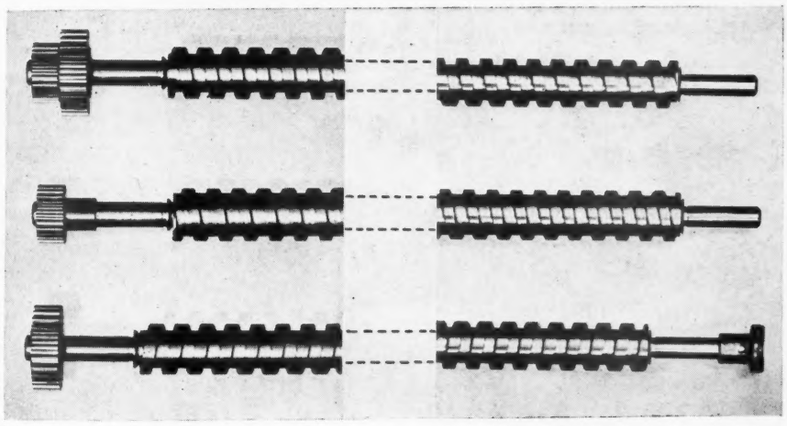
Patent Pending

- Save metal, type, makeready, duplicate composition, rollers, ink, presses.
- Simple directions for producing accurate printing plates furnished with each press.
- Connects to 110 volt lighting circuit.
- Screw toggle develops tremendous pressure when needed.
- Thermostatically controlled heating elements maintain even operating temperature. Low current consumption.

The EVATYPE Precision Molding and Vulcanizing Press is precision built and sells for $585.00 F. O. B. Deerfield, Ill. Special terms. Write for information.

AMERICAN EVATYPE CORPORATION
DEERFIELD, ILL.

CONVERT OLD LINOTYPE MACHINES TO Fast Distribution



These screws will distribute matrices twice as fast to the magazine and give *Smoother* — more certain delivery.

. . . at a fraction of the usual cost — and with a minimum of labor . . .

These Screws are assembled and timed so accurately in our factory that installation is simple. Threads are *ground*.

SEND FOR A DESCRIPTIVE LEAFLET
USE "STAR" PARTS FOR ECONOMY!

Precision TRADE ★ MARK Parts

Ace Belts have a deserved reputation as the longest wearing belts that money can buy and they won't stretch!

LINOTYPE PARTS COMPANY

NEW YORK, 203 Lafayette Street
CHICAGO, 318 West Randolph St.
MINNEAPOLIS, 503 Fourth Ave., South
DENVER, 1441 Blake St.
KANSAS CITY, 314 West 10th Street

ELECTRIC HEAT

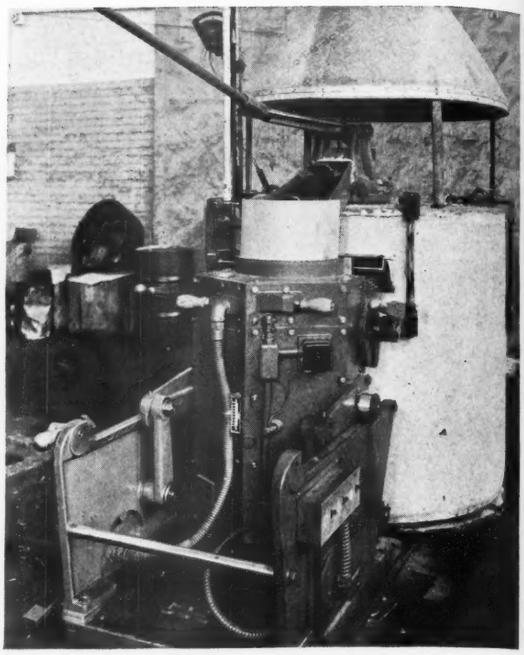
(*Continued from Page 26*)

the casting box at exactly the correct temperature for every plate cast.

The space between the furnace pot and shell was packed with rock wool insulation and a layer of asbestos cement about an inch thick was pasted over the outside of the furnace shell.

It has been found that with thermostatically controlled electric heat holding the temperature of the metal in the furnace to within plus or minus a few degrees of the setting and the thermostatically controlled electrically heated spout operated at approximately 550 deg. which can be depended upon to prevent an appreciable drop in the metal temperature on its way to the casting box, an operating temperature of 575 deg. is sufficient in the furnace.

After installation of the furnace, the customer embodied some new application of electric heat to the casting box to eliminate preliminary casts and improve plate dimension. Since development of electric heaters, strip heaters clamped against the back of the concave or face surface, controlled by a 3-heat switch, have been incorporated in casting boxes to bring them up to temperature. The mat is placed against this surface and it is desired to keep the metal in a fluid state until it has filled the impressions in the mat.



Stereotype furnace in plant of Greater Buffalo Press, Inc., and casting box with midget thermostat which controls temperature in the front section of the box, and the thermometer. The pump spout electrically heated and thermostatically controlled, is covered with insulation and sheet-metal casing.

Executives of the company concerned in this story, in accordance with the principles of metallurgy, have found that as the metal froze clear crystals precipitated pushing any impurities before them. Because of heat applied to the face of the plate the metal on this side solidified last and all the impurities emerged on the printing surface. To correct this condition, four 800 w. strip heaters were applied to the back of the "plunger" or convex surface of the casting box. By maintaining a higher temperature on this side so that the face of

WORKING SIDE No. 12007-E

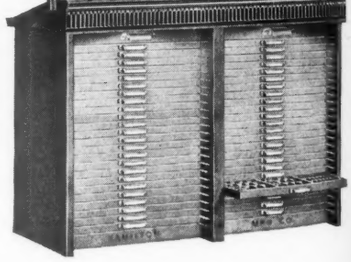
SAVE FLOOR SPACE...

This type cabinet required ONE-THIRD LESS SPACE than the usual two-tier cabinet. It is amazingly concentrated. One man said, "It is almost a complete composing room . . . within arm's reach!"

PLENTY OF STORAGE SPACE . . . yet type and materials storage has not been sacrificed. It carries on the working top a lead and slug case, and a spacing materials case, and underneath gives the choice of either an additional lead and slug rack or a copy drawer and quarter case unit.

ROOMY WORKING TOP . . . the working surface is 20¼" wide. It will take a type case without covering the materials cases.

CASE SIDE . . . showing No. 13217 Lead and Slug Rack . . . Spacing Materials Case No. 13223 . . . This Lead and Slug Rack also Spacing Materials Case are optional equipment and must be ordered separately if wanted . . . 48 full-size California Job Cases with combination pulls and labelholders . . . Overall floor space only 72¼" x 26⅜".



CASE SIDE No. 12007-E

WORKING SIDE . . . showing new Double-Depth Adjustable Lead and Slug Case in place . . . large working surface where full-size type cases and large galleys may be placed . . . 3⅜" projection of top for knee, toe room.

FREE CATALOG . . . Full information on this No. 12007-E Concentrated Type Cabinet is given in HAMILTON'S new No. 22 Catalog on pages six and seven. Write for your free copy today.

HAMILTON
MANUFACTURING COMPANY
TWO RIVERS • WISCONSIN

HAMILTON MFG. CO.
Two Rivers, Wisc.
Send me full information about the No. 12007-E Type Cabinet.

Name.....

Address.....

City and State.....

DID YOU KNOW?

DID YOU KNOW that proper casting temperature ranges for good metal are: Slug machines 540°—550° Standard Monotype 650°—800° • Stereotype 575°—625°

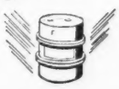
•

DID YOU KNOW that skimming stereotype metal at temperatures above 725° gives excessive antimony losses?

DID YOU KNOW that a one-inch blanket of dross on the stereotype pot is ideal for dross accumulations?

•

DID YOU KNOW that a hollow slug is sometimes caused by a worn plunger?



DID YOU KNOW that Imperial originated the dross drum practice?

•

DID YOU KNOW that blisters on monotype are generally the result of too much *speed?*

•

DID YOU KNOW that over

41%

of all type metal used in the U.S.A. is furnished by Imperial?

•

DID YOU KNOW that the condition of *your* type metal is Imperial's responsibility—as soon as the first pound of Imperial enters your plant?

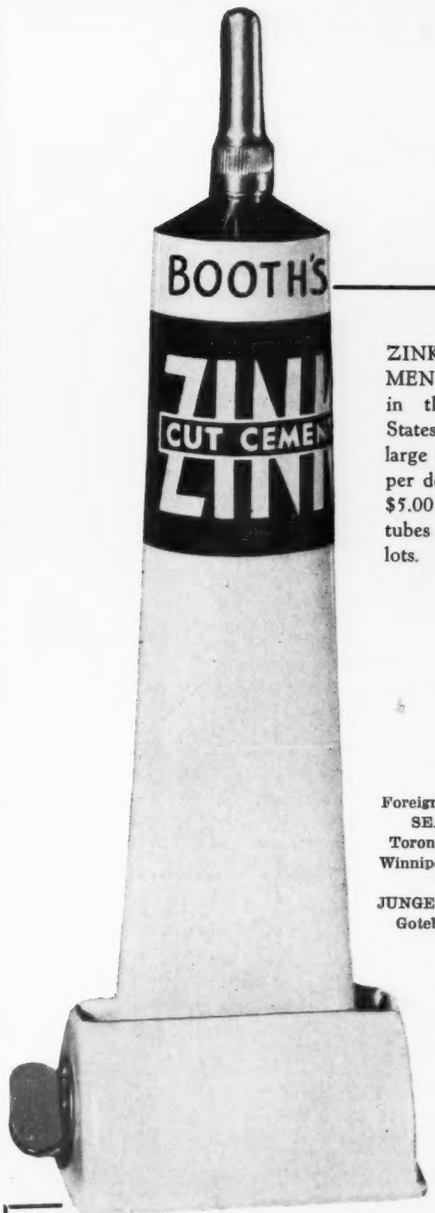
DID YOU KNOW that the booklet "Type Metal Problems and Their Solution" is sent on request to anyone in the printing field?

IMPERIAL TYPE METAL CO.

Philadelphia • New York • Los Angeles • Chicago

Imperial

TAKES THE GUESS OUT OF TYPE METAL



ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

Foreign Distributors:
SEARS, LTD.
Toronto, Montreal, Winnipeg, Vancouver, Canada
JUNGER & JUNGER
Goteborg, Sweden

When used according to directions,* BOOTH'S ZINK CUT CEMENT *is the fastest cut-mounting means in existence.

(1) See that back of cut is free from grit and greasy substance.

(2) Apply several patches according to size of cut. Allow cut to be exposed to air for half minute. Spread cement with rule or a lead.

(3) Press cut firmly on base with slightly rotating motion—and there you are!

For cuts to be mounted on wood base, simply apply a slightly greater amount of cement and expose to air for a full minute before pressing cut on base. Best results are obtained when cut, base and the cement are of room temperature (at least 70 degrees F.).

E. A. BOOTH RUBBER CO.

364 Rockefeller Bldg. • Cleveland, Ohio

the plate solidified first any impurities emerged on the back of the plate where they were later removed by the plate shaver. Heating units in the front and on the "plunger" or back, are separately controlled by General Electric midget thermostats. Temperature at the front of the box is maintained at approximately 300 deg. and in the "plunger" at approximately 350 deg.

In addition to this problem they found that metal first solidified down the edge of the plates next to the side sticks in the casting box because of greater radiation losses along the sides. Type metal expands as it solidifies. The metal solidifying first on the sides trapped molten metal near the center of the plate which had the effect of thickening the plate toward the center or distorting it as it sought to expand on freezing. To correct this condition, a 240 w. Calrod type heating unit ⅜ diam. and 18 in. long was mounted in a slot in each side stick. This temperature is automatically maintained at approximately 350 deg. by a small thermostat mounted on one side stick which serves to control both heaters. Plates now cool and solidify at a uniform rate from side to side and freeze from face to back giving a uniform thickness and all disfiguring impurities are held to the plate backs.

It was not long ago that this company's plates were cast 7/16 in. thick. When casting plates in the box as originally designed, the weight of the metal and stored heat in the box were depended upon to cause the metal to flow properly and fill depressions in the mat. It was necessary to take a heavy cut from the back of the plates which frequently warped plates. As the thickness was reduced and thinner cuts were taken, depressions were left, especially along the edges of the plate, which had to be built up by paper pasted on the back. Uneven wear on the shaver straight edge necessitated frequent replacements. With the additional thermostatically controlled electric heat applied to the casting box this company now casts plates 0.256 in. thick, takes 0.006 in. cut off the back and successfully holds plates to a variation of 0.0005 inches in thickness.

In the fall of 1937, increasing production and a desire to cut stereotyping hours from 12 to 8 a day necessitated additional capacity. On the basis of the performance of the first furnace, a second similar one was ordered. Consideration was given to replacing the first furnace with a single larger furnace able to accommodate two pumps, but it was considered advisable to have two separate units as a precautionary measure and because of the greater flexibility afforded.

Also, another casting box was purchased, built to the customer's specifications incorporating the improvements in the original box described above and equipped with General Electric heating units and thermostats.

Speed in casting large quantities of metal is not a consideration with this company as with daily newspapers and both furnaces draw less than 12 k.w. or half their full capacity during normal operation. An automatic interlock has been installed which can be used to cut one furnace off the line when the furnace having right of way is drawing power. In this way the combined demand of both furnaces is limited to 24 k.w. At times desired, when one press is shut down being made ready for a run, the full 24 k.w. in one furnace can be used to bring it to 700 deg. for crossing while the other is operated on 12 k.w. casting without increasing plant electrical demand or necessitating a halt in casting operations.

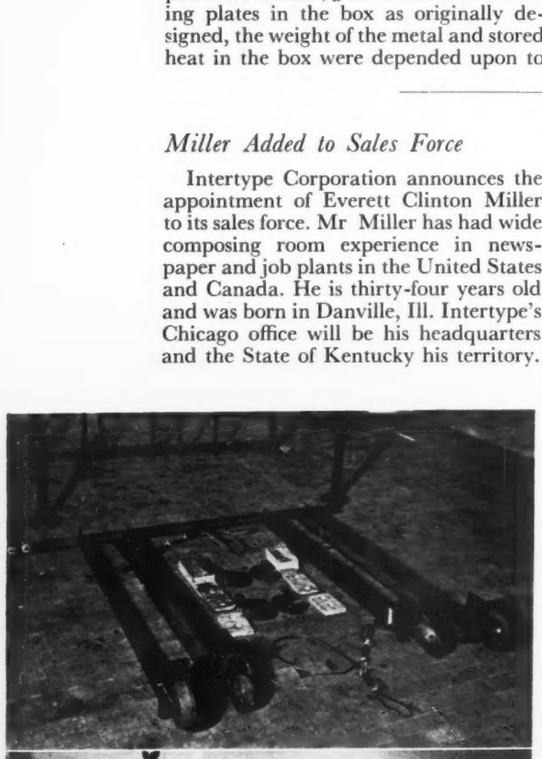
The newest pump was likewise equipped with General Electric heating elements and a midget thermostat, sheet insulation and a protective sheet metal cover for the spout were furnished with this eauipment by the pump manufacturer.

Comparatively Speaking

For visually comparative purposes, American Printing Ink Co., Div. of General Printing Ink Corporation, has published a 9 in. by 12 in. folder printed in black and brown. The pages however, are printed approximately half with ordinary black ink and Glosstone black and brown inks. The contrast between the inks is very effective. Copies are available upon request to American Printing Ink Co., direct, or through *Printing Equipment Engineer*.

Miller Added to Sales Force

Intertype Corporation announces the appointment of Everett Clinton Miller to its sales force. Mr Miller has had wide composing room experience in newspaper and job plants in the United States and Canada. He is thirty-four years old and was born in Danville, Ill. Intertype's Chicago office will be his headquarters and the State of Kentucky his territory.



In the upper picture are shown the component parts of a frame which was devised especially to support the pile feeder taken from a printing press for removal to its new quarters in the pressroom of the new Government Printing Office building described in the article printed elsewhere in this issue. The angle iron frame supports, cross rod, blocks, clamps and steel cable are used to truss up the feeder mechanism as shown in the lower picture.

In the lower picture is shown the pile feeder trussed up in the frame ready for removal with the press to new position. This plan permits practically intact movement of essential machine parts.

New Quarters

Fuchs & Lang Div., General Printing Ink Corporation, has opened new quarters in the Cincinnati branch at Third and Walnut Streets. The branch will be under the management of Frank E. Steele.

Molded Rubber Plate Booklet

A folder has been published by Ideal Roller and Manufacturing Company, in which is described the company's line of plate gums for molded rubber plates. The purpose of each gum is given as well as Shore (after curing) hardness.

Static Eliminator Folder

Western Brush Company has prepared a folder concerning the Western Static Eliminator which functions to withdraw static from the paper as it passes over the brush in the press. A copy of the folder will be sent to any printing executive.

Invitation Extended

The eighth annual convention of the National Association of Photo-Lithographers will be held in the Palmer House Chicago, Ill., September 26, 27, and 28. The Association is inviting manufacturers of equipment and supplies who sell the industry to exhibit their wares at this convention.

Color Clinic

In the Galleries of General Printing Ink Corporation, 100 Sixth Avenue, New York, N. Y., at 7:30 p. m., March 20, will be held a clinic on color. The clinic is entitled "Color Comes of Age" and will be under the direction of Faber Birren, Julian E. Garnsex, and Frederick H. Rahr, three color specialists. Attendance by invitation only.

For Sale

Whitlock, two-revolution, four-roller cylinder press, bed size 28 x 42, in very good condition. Price $450.00 F.O.B. our plant. Master-Craft Corp., Kalamazoo, Mich.

PRINTING PATENTS REPORT

This patent data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Patents issued from Jan. 30th through Feb. 20th.

Bookbinding:

2,188,773. BOOKBINDING OF THE WIRE RING TYPE having a stiffening support or bar which supports the rings and which the covers are fastened by the rings. Invented by James A. Eden, Springfield, Mass. Assigned to White & Wyckoff Mfg. Co., Holyoke, Mass. Application August 31, 1938. 1 claim.

2,189,929. METHOD AND APPARATUS FOR PREPARING BOOKS FOR BINDING. Invention comprises means for automatically feeding groups of unbound books, arranged side by side, to apparatus for sidewise compression of the books, trimming of the front, head and tail edges, and application of glue. Invented by Carl Schramm, North Coventry, Conn. Assigned to Smyth Mfg. Co., Hartford, Conn. Application March 15, 1939. 24 claims.

2,190,722. AUTOMATIC MACHINE for shaping or spiraling wires to be used in binding perforated leaflets, etc. Invented by Andre Lucien Martin, Paris, France. Unassigned. Application May 19, 1938. 8 claims.

Composing Equipment:

2,188,446. COMPOSING ROOM SAW, including improved means for lining up a cut that is out of square and trimming it with respect to a line of type or object in the cut, and accommodating and correctly aligning anything from a zinc etching to type high cuts. Invented by Frederick W. Seybold, Westfield, N. J. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application March 12, 1937. 10 claims.

2,188,976. SAW TRIMMER VISE adapted to be detachably mounted to a saw table for trimming slugs, such as spacers for printing set-ups. Invented by William Hertler, Pittsburgh, Pa. Unassigned. Application March 14, 1938. 2 claims.

2,188,988. SLUG CASTING MACHINE enabling the operator to make an adjustment of less than a half-em without the necessity of loosening and retightening the clamping screw in the left-hand bearing. Invented by Herman T. Sundstrom & Clarence A. Stopple, Houston, Tex. Assigned to Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn, N. Y. Application February 4, 1939. 16 claims.

2,188,999. TYPOGRAPHICAL SLUG CASTING MACHINE, involving a matrix having a plane face and a character indentation on the plane face, in combination with a holder having a casting face set forward with reference to the plane, character-bearing face. Invention is particularly applicable where the characters involved are ideograph characters, such as are used in Chinese and Japanese printing. Invented by Herbert Ellis, Shanghai, China. Assigned to Linotype & Machy., Ltd., London, England. Application August 18, 1938. 17 claims.

2,189,097. TYPE LINE EJECTING DEVICE for matrix setting and type line casting machines permitting rapid and easy change of size. Invented by Kurt Bendorff, Berlin, Germany. Assigned to Typograph G. m. b. H., Berlin, Germany. Application February 6, 1939. 12 claims.

2,189,098. PROCESS AND APPARATUS for producing completely cast type-line bodies for matrix-composing and type-line casting machines. Invented by Kurt Bendorff, Berlin, Otto Bieber, Berlin-Lichterfelde, and Kurt Dahnert, Berlin-Carow, Germany. Assigned to Typograph G. m. b. H., Berlin, Germany. Application May 25, 1939. 8 claims.

2,189,113. AUTOMATIC DEVICE FOR FEEDING TYPE METAL PIGS to a melting pot in line casting or type setting machines. Invented by Albert H. Jung, Brooklyn, N. Y. Assigned to United Amer. Metals Corp., 202 Diamond St., Brooklyn, N. Y. Application October 17, 1939. 5 claims.

2,189,539. METHOD OF TYPE SETTING USING FOUNDRY TYPE comprising assembling and justifying a line of type employing compressible and expansible quads, and then applying a holder to the type. Invented by John L. Weigand, Dayton, Ohio. Unassigned. Application February 3, 1938. 5 claims.

2,190,112. TYPOGRAPHICAL COMPOSING AND CASTING MACHINE wherein a uniform justifying pressure is applied individually upon the spacebands, irrespective of the number of spacebands contained in the line. Invented by Hermann Brandenburg, Berlin-Tempelhof, Germany. Assigned to Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn, N. Y. Application November 2, 1939. 20 claims.

Feeding, Folding, Delivery:

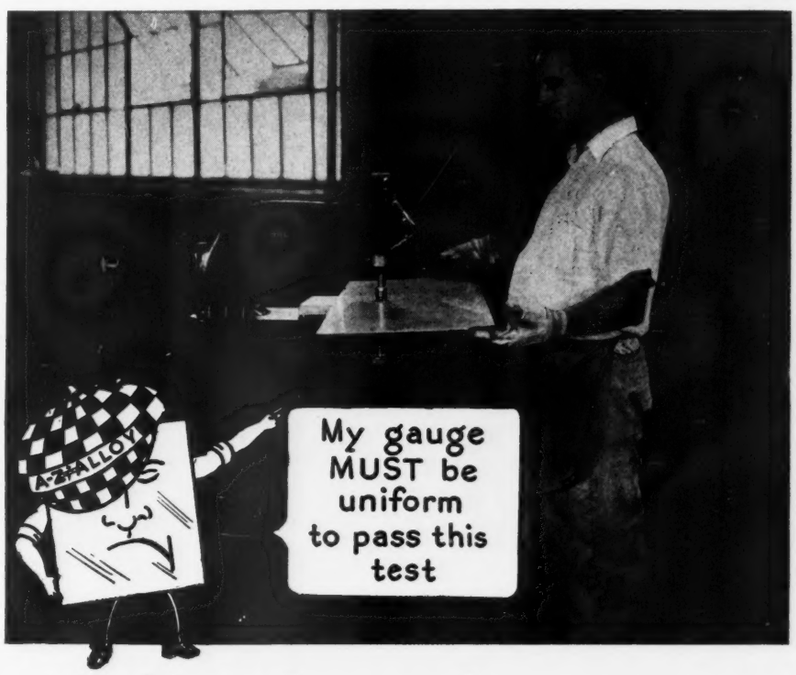
2,190,413. CONVEYOR TABLE FOR CARRYING SHEETS FROM ONE FOLDING UNIT TO ANOTHER, with means for turning the sheet in either direction and accurately registering it for the succeeding fold. Invented by William W. Davidson, Evanston, Ill. Assigned to Davidson Mfg. Corp., 737 W. Jackson Blvd., Chicago, Ill. Application May 2, 1938. 24 claims.

2,190,414. FOLDING MACHINE capable of producing any combination of three parallel and/or right angle folds. This flexibility is achieved by a novel arrangement and organization of the folding units and their associated conveying tables. Invented by William W. Davidson, Evanston, and William W. Davidson, Jr., Niles Center, Ill. Assigned to Davidson Mfg. Corp., 737 W. Jackson Blvd., Chicago, Ill. Application May 2, 1938. 10 claims.

2,190,415. FOLDING MACHINE in which the sheet being folded passes fewer idle folding units than in former folding machines. Invented by William W. Davidson, Evanston, Ill. Assigned to Davidson Mfg. Corp., 737 W. Jackson Blvd., Chicago, Ill. Application August 9, 1937. 15 claims.

2,190,416. CONVEYOR TABLE FOR CARRYING SHEETS FROM ONE FOLDING UNIT TO ANOTHER and capable of turning the sheet in either direction and accurately registering it for the subsequent fold. Invented by William W. Davidson, Evanston, Ill. Assigned to Davidson Mfg. Corp., 737 W. Jackson Blvd., Chicago, Ill. Application June 4, 1938. 4 claims.

2,190,417. FOLDING MACHINE including a conveying and turning unit utilising the positive turning principle of conical rolls. Invented by William W. Davidson, Jr., Niles Center, Ill. Assigned to Davidson Mfg. Corp., 737



Machines famous for accuracy test this metal's every inch

The uniformity of every sheet of A-Z Alloy and Zomo Electric Zinc is assured by instruments famous for accuracy.

With the scientifically exact texture assured by the electric induction furnace, and the care used in checking each subsequent step in production right thru to the finished sheet, the engraver can depend upon getting the very best results from his engraving skill and careful effort.

You can now order Zomo Electric Zinc and A-Z Alloy, plain or BACKOTED, from leading metal suppliers.

ZOMO ELECTRIC BACKOTE

A-Z ELECTRIC ALLOY BACKOTE

W. Jackson Blvd., Chicago, Ill. Application July 5, 1938. 21 claims.

2,190,418. SHEET CONVEYOR for carrying sheets from one folding unit to another and capable of turning the sheets through a desired angle before delivery. Invented by William W. Davidson, Evanston, and Alfred Anderson, Chicago, Ill. Assigned to Davidson Mfg. Corp., 737 W. Jackson Blvd., Chicago, Ill. Application February 24, 1936. 5 claims.

2,190,823. METHOD AND APPARATUS FOR FOLDING STRIPS OF PAPER INTO LONGITUDINALLY FOLDED OR PLEATED STRIPS. Invention operates at high speed, is easily adjusted to position the folds, may be easily cleaned to remove accumulations of ink and paper, and forms a tightly wrapped reel of folded material to be subsequently used in other machines. Invented by William S. Cloud, Wilmette, Ill. Unassigned. Application June 15, 1937. 10 claims.

Miscellaneous:

2,188,867. SYNTHETIC RUBBER BASE INK for rotogravure or intaglio printing. Invention is particularly adapted for use in processes of decorating flexible rubber articles. Invented by Alfred B. Poschel, Chicago, Ill. Assigned to Meyercord Co., Lake & Lorel Sts., Chicago, Ill. Application April 30, 1938. 2 claims.

2,190,188. HOLDER for line justifying sheets. Invented by Harry Landsiedel, Wilton, Conn. Assigned to Remington Rand, Inc., 1939 Ensinger St., Buffalo, N. Y. Application (original) March 17, 1936. Divided and this application January 25, 1938. 3 claims.

Plate Making:

2,188,528. METHOD AND MACHINE for shaping to curved contour and drying out or "scorching" matrices used in the production of stereotype printing plates. Invented by George M. Clark, Lynn, Mass. Unassigned. Application December 9, 1936. 5 claims.

2,189,682. PRINTING PLATE of the type wherein a vulcanized or hand engraved printing plate is mounted on a flexible metal back. Invention provides flexible plate backing structure and mounting means such that adjustment can be made without removing the plate from the cylinder. Invented by Julius Schmutz, Louisville, Ky. Unassigned. Application August 31, 1936. 12 claims.

2,190,185. METHOD OF PRODUCING PRINTING PLATES from which prints may be made containing printed and unprinted areas so proportioned as to give the effect of the variations in tone of an original subject or a continuous-tone photographic image. Invented by Arthur C. Hardy, Wellesley, Mass. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Original application February 17, 1937. Divided and new application April 15, 1938. 4 claims.

2,190,186. METHOD OF PRODUCING PRINTING PLATES from which prints may be made containing printed and unprinted areas so proportioned as to give the effect of the variations in tone of an original subject or a continuous-tone photographic image. Invented by Arthur C. Hardy, Wellesley, Mass. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Original Application February 17, 1937. Divided and new application April 15, 1938. 2 claims.

2,190,947. STRIPPING, INSERTING AND DRAWING TABLE of the type employed in commercial photography and graphic arts. Invention is particularly directed to means whereby photographic negatives, etc., can be accurately and conveniently positioned or aligned preliminary to making half-tones, zinc etchings, etc. Invented by Edward F. Kinzler, Pittsburgh, Pa. Unassigned. Application November 22, 1938. 5 claims.

Printing Presses:

2,189,073. SECTIONAL VIBRATOR ROLLER for printing presses whereby printing in several colors can be performed. Invention provides means whereby sections of the roller are varied relative to one another, as well as means by which the entire roller can be removed from the press. Invented by Jesse Levine, New York, N. Y. Unassigned. Application April 27, 1938. 3 claims.

2,190,058. WEB SPLICING DEVICE FOR NEWSPAPER PRESSES for effecting a satisfactory splice while the press is operating at full speed. Invented by Eugene P. Doyle and Leo F. Long, Toledo, Ohio. Unassigned. Application October 4, 1937. 7 claims.

2,190,379. WEB TENSIONING MECHANISM FOR HIGH SPEED PRINTING PRESSES. The device is controlled by a roller running in a loop in the web, and under control of the roller acts directly upon the web to compensate for variations in the tension thereof. Invented by Albert J. Horton, White Plains, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application May 1, 1936. 18 claims.

2,190,380. PLATE CLAMPING MECHANISM FOR PRINTING MACHINES whereby a precurved plate mounted on a form cylinder is so held as to prevent bowing outward of the edges by centrifugal force. Invented by Albert J. Horton, White Plains, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application June 2, 1937. 16 claims.

2,190,385. PLATE CLAMP FOR ROTARY PRINTING PRESSES having actuating means to impart a combined rocking and rectilinear motion to the clamp, whereby the clamp is retracted below the surface of the cylinder to permit placing of the plate, and whereby the clamp is projected above the surface of the cylinder to engage the positioned plate. Invented by William P. V. Ross and Donald H. Mars, Battle Creek, Mich. Assigned to Duplex Printing Press Co., Battle Creek, Mich. Application February 4, 1939. 21 claims.

2,190,929. PRINTING PRESS FOUNTAIN of the type having a roller for bringing up ink and a resilient blade for removing surplus ink, wherein a given amount of adjustment may be made at any point on the blade by a given manipulation of a remote adjusting mechanism. Invented by Herbert C. Behrens, Battle Creek, Mich. Assigned to Duplex Printing Press Co., Battle Creek, Mich. Application August 16, 1937. 1 claim.

2,190,948. TRANSFER MACHINE by which a single image on a photographic film can be quickly and conveniently transferred to a plurality of positions about the sensitized surface of a printing cylinder, with each image on the cylinder being equally spaced relative to the other images. Invention is particularly applicable for multiple production of catalog pages, etc. Invented by Leon E. La Bombard, Nashua, N. H. Assigned to Oswego Falls Corp., Fulton, N. Y. Application September 16, 1937. 7 claims

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D.C.

Linotype—Intertype
replacement parts

New Molds, universal and adv. fig. style	$ 55.00	Back Knives	$ 2.00
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Spacebands	.75	Dis. Box Bars	4.50
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Rubber Rolls for Keyboard	.60	Vise Locking Screws	3.00
Border Blocks	4.00	Assembler Stars	.09
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		Watch Oil for Keyboard Cams	.50
		First El. Spring Pawls	.07
		Knife Wiper Flags	.05

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Rebuilt Molds (uni. and adv. fig.) ($10 allowance for old)	$ 35.00	Rebuilt Margach Type Feeders	$ 55.00
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Rebuilt Electric Pots	150.00	Rebuilt Sec. El. Bars	4.00
Rebuilt Monomelts	150.00	Rebuilt Dis. Box Bars	2.50
Rebuilt Gas Pots	85.00	Reground Back Knives	1.25
		Reground Side Knives, set	10.00

REPAIRS

Rebuilding Magazines	$25-40	Regrinding Side Knives, set	$ 2.50
Rebuilding uni. and adv. fig. molds	25.00	Rebuilding Back Jaws	4.50
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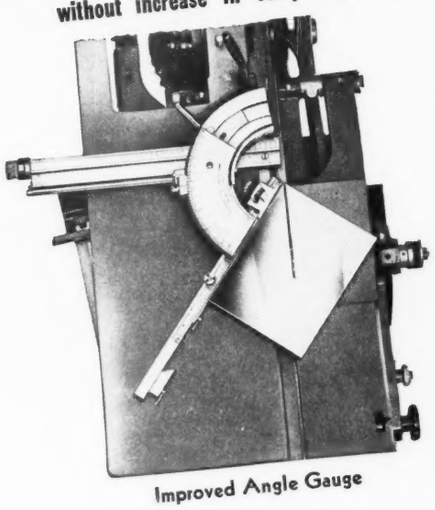

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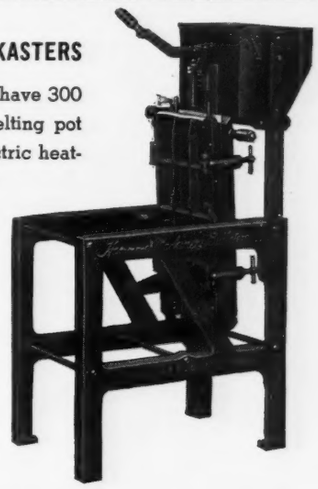

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Conveyor Relieves Bottleneck

By GEORGE GRANT*

*Des Moines (Ia.) *Register and Tribune*

JOE MENARD, Des Moines (Ia.) *Register and Tribune* Mailing Room Superintendent, aided and abetted by Machinist Jim Cocks, recently developed a conveyor that has speeded up operations tremendously. Menard makes no secret of the fact that, prior to inauguration of the new machine, he and his boys were having just a little trouble keeping up with Press Superintendent Val Wells and his crew, especially on Saturday nights when servicing the Sunday *Register's* more than 350,000 readers.

The new conveyor has gone far to even things up. Its chief advantage is that it provides space for enough men counting

View of conveyor in front of tying machine in plant of Des Moines (Ia.) Register and Tribune. Before the conveyor was developed, only four men could feed the tying machine. In less space, the conveyor provides space for seven men to push bundles of papers at less than arm's length to the conveyor which handles the bundles pushed at it from any angle without fouling. The conveyor was developed by Mailing Superintendent Joe Menard and Machinist Jim Cocks. Mr. Menard's crew now can keep up with Press Superintendent Val Wells and his crew.

Plates made from Burgess Chrome Mats exemplify the skill of the stereotype room -- and reflect the good judgment that insists on using them.
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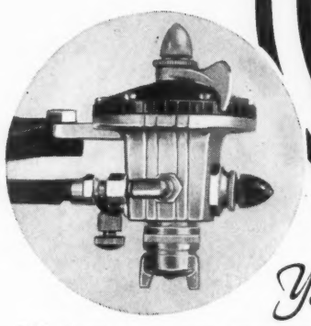

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bundles to keep one of the tying machines working at top speed. Then, too, it conserves space, which is at a premium in the *R. and T.* mailing department. Finally, it can be converted into a flat table for wrapping bundles when not in use feeding the tying machines.

One of the most outstanding features of the conveyor is its ability to handle bundles pushed at it from any angle without fouling. The feature is not accidental. Superintendent Menard had a few well solidified ideas before he started designing operations. Avoiding a belt or coil wire conveyor was one of them.

The solution was a track consisting of two kinds of rollers. Between each two large, power-driven rollers is one smaller roller, undriven. The smaller rollers permit the bundles to move evenly without catching. The men working on the new conveyor push each bundle less than arm's length after counting it; previously, each bundle had to be pushed several feet across a table.

Before the new conveyor was developed, only four men could feed the tying machine; in less space, the present machine provides space for seven men, working at top speed.

On the city edition of the afternoon *Tribune*, the conveyor makes it possible for one mailer to tie approximately 40,000 papers for city subscribers without any help. The papers are delivered to him in the exact position in which they're to be tied.

"We've known for some time that something had to be done to speed things up," said Menard. "Once every two weeks my night and day foremen get together with me for dinner to talk things over, make suggestions and discuss improvements. After we had the original idea of this conveyor, all of us threw in suggestions. The good ones were kept, the bad ones eliminated, and this is the result."

RECENTLY ELECTED OFFICERS AND DIRECTORS OF THE INDIANAPOLIS CLUB OF PRINTING HOUSE CRAFTSMEN.

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EQUIPMENT SALES

Hoe Presses for Plain Dealer

Cleveland Plain Dealer recently ordered 12 Hoe arch-type Super-Production units to be equipped with two Super-Production folders, twelve 3-arm reels, twelve electrically-controlled automatic tensions and twelve full-speed paster mechanisms. The press will be equipped with anti-friction bearings, plate lock-up mechanism, automatic ink pumps, special crankshaft type of ink distribution drive. Micrometer impression adjustment will be provided with a new type of gauge that can be read from either side of the press. Pressure circulated automatic lubrication, within oil-tight housings, will be visible through port holes. The two super-production folders required to handle the output of this press will be equipped with anti-friction bearings, and features of construction that make for ready accessibility and easy adjustments. Other equipment includes two double upper formers, four duo ink rails and two reversible cylinder arrangements for daily run of paper color.

January Kluge Installations

12x18 Kluge Automatic Presses — Lutheran Free Church Publ. Co., Minneapolis, Minn.; Central Cooperative Wholesale, Superior, Wis.; Jansky Printing Co., Watertown, Wis.; W. F. Hall Printing Co., Chicago, Ill.; Central Ohio Paper Co., Columbus, Ohio; Pulapart Forms Co., Troy, Ohio; The Sidney Printing Works, Cincinnati, Ohio; Smith County Review, Smith Center, Kansas; Renkel Printing Co., Saint Louis, Mo.; Wright Printing Co., Des Moines, Iowa; American Museum of Natural History, New York City, N. Y.; R. A. Nessler and Sons, Brooklyn, N. Y.; Pell Press, New Rochelle, N. Y.; Walter S. Purvis, Utica, N. Y.; Robert Press, New York, N. Y.; C. A. Turrentine Co., Fort Worth, Tex.; New Orleans Envelope Company, New Orleans, La.; Birdseye Press, Inc., Bridgeport, Conn.; Cameron Herald, Cameron, Tex.; Klos-Sternenberg Co., Houston, Tex.; Atlas Printing Co., Oklahoma City, Okla.; MacDonald Lithographing Co., Mineral Wells, Tex.; Conner the Printer, Grand Junction, Colo.; Oliver Finnie Co., Memphis, Tenn.; Daytona Beach Independent, Daytona Beach, Fla.; McCourt Label Cabinet Co., Inc., Bradford, Pa.; Doyle Printing Service, Washington, D. C.; Service Printing Company, Martinsville, Va.; Jacob De Marchi, Vineland, N. J.; Campbell's Printery, Philadelphia, Pa.; Fayette Publishing Co., Uniontown, Pa.; Herald Print Shop, Elizabethtown, Pa.; Gordon T. Collins, Manhattan Beach, Calif.; Inglewood Quick Press, Inglewood, Calif.; Chester Troan Printery, Los Angeles, Calif.; Ritchey Printing Company, Los Angeles, Calif.

12x18 Kluge Feeders — Pence Printing Co., Indianapolis, Ind.; Progressive Press, Wilmington, Del. *12x18 Kluge Combination Die-Cutting & Printing Presses* — Reuben H. Donnelley Corp., New York, N. Y.; Anderson Printing Co., Tacoma, Wash. *10x15 Kluge Automatic Presses* — Dearborn Publishing Co., Aurora, Ind.; Ritzmann Press, Inc., Chicago, Ill.; E. C. Kinney Printing Co., Chicago, Ill.; Matz Specialty Co., Chicago, Ill.; G. Lindemann & Sons, Cincinnati, Ohio; Lindy's Printing Co., Quincy, Ill. *10x15 Kluge Feeders* — Lawson-Worley Printing Co., Indianapolis, Ind.; William A. Reed, Detroit, Mich.; Bowling Green Printing Co., New York, N. Y.; Palmer Printing Co., Charlotte, N. C.; R & W Printing Co., Charlotte, N. C.; Clifford Beisel, Avalon, Pa. *10x15 Kluge Combination Die-Cutting & Printing Presses* — The Irwin-Hodson Co., Portland, Ore. *4 Roller Kluge Automatic Presses* — Joe M. Chapple & Co., Ashland, Wis.; Wallace Printing Co., Jeffersonville, Ind.; Acme Typewriter Supply Co., New York, N. Y.; The Wakefield News, Wakefield, Mich.; Remington Rand, Inc., Buffalo, N. Y.; Fort Dearborn Litho. Co., Chicago, Ill.; Remington Rand, Inc., Buffalo, N. Y.

Intertype Orders

One or more Intertypes have been ordered recently by the following: Minden (Neb.) *Courier;* New Britain (Conn.) *Herald;* Atlantic Linotype Co., Brooklyn, N. Y.; Wave Publishing Co., Rockaway Beach, N. Y.; Lowell (Mass.) *Sun;* Fall River (Mass.) *Herald-News;* Poors Printing Co., Wellesley, Mass.; St. Meinrad Printing Co., St. Meinrad, Ind.; Firmin-Greer Co., Marshall, Tex.; Mounted Service School Press, Ft. Riley, Kan.; Davis Printing Co., Memphis, Tenn.; New York *Post; Typographic Vogue,* New York; Chick Taylor Press, Clovis, N. M.; Chicago (Ill.) *Tribune;* Galveston (Tex.) *News;* Associated Publications, Cranston, R. I.; The Gould Co., New York; Bowles, Printer, Brooklyn, N. Y.; Allied Typesetting Co., Chicago, Ill.; Hambleton Printing & Publishing Co., Wilmington, Del.; Kalamazoo (Mich.) *Gazette;* Chivers Bookbinding Co., Brooklyn, N. Y.; Board of Education, Rochester, N. Y.; Springfield (Ill.) *Illinois State Register;* Dallas (Tex.) *News;* H. W. Wilson Co., New York; Maryland Casualty Co., Baltimore, Md.; Los Angeles City High School District, Los Angeles, Cal.; Duluth (Minn.) *Herald & News-Tribune;* Messenger Printing Co., Des Moines, Ia.; St. Paul (Minn.) *Pioneer Press & Dispatch;* Christian Board of Publications, St. Louis, Mo.; People's Printing Co., Goose Creek, Tex.; Kennedy & Esplin, Oakland, Cal.; A-1 Composition Co., Chicago, Ill.; Indiana (Pa.) *Gazette;* Peninsula Newspapers, Inc., Palo Alto, Cal.; Minneapolis (Minn.) *Star-Journal;* Decatur (Ill.) *Herald & Review;* Butler (N. J.) *Argus.*

Linotype Installations

Eleven Blue Streak Linotypes have been installed by the Chicago Tribune.

The New York Times has added four Blue Streaks.

One or more Linotypes have been installed by the Galesburg (Ill.) *Register-Mail;* Jaggars-Chiles-Stovall, Inc., Dallas; Sidney (Ohio) *Daily News;* Grove City (Ohio) *Record;* Chinn Linotype Corporation, San Francisco; West Town Typesetting Company, Chicago; B. M. Chandler Company, Cambridge, Mass.; Lancaster (Pa.) *Intelligencer-Journal, New Era and News;* Jeffersontown (Ky.) *Jeffersonian;* Dawson County Courier, Lamesa, Texas; Log Cabin Democrat, Conway, Ark.; Federal Printing Company, Columbus, Ohio; Wausau (Wis.) *Record-Herald;* Fetter Printing Company, Inc., Louisville, Ky.; Fayette (Mo.) *Democrat-Leader* and the *Advertiser;* Standard Printing Company, Canton, Ohio; Roth Typesetting Company, Cleveland, Ohio; Kankakee (Ill.) *Republican-News;* Dickenson Printing Company, Ashland, Ky.; Fort Wayne (Ind.) *Journal-Gazette;* Arcade Printing Company, Jamaica, New York; Globe Printing Company, New Wilmington, Pa.; West River Progress, Dupree, S. D.; Fort Worth Linotyping Company, Fort Worth, Texas; West Point (Neb.) *Republican;* Ruttle, Shaw & Wetherill, Inc., Philadelphia, Pa.; Winchester (Ky.) *Sun;* Alvin C. McElvain, Spokane, Wash.; Braham (Minn.) *Journal;* Wrightsville (Ga.) *Headlight;* Kalispell (Mont.) *News;* West Coast Printers, Los Angeles; Chatham News, Siler City, N. C.; Sidney (Ohio) *Daily News,* Fulton (Ky.) *Daily Leader;* Acme Typesetting Company, Chicago; Midland (Mich.) *Daily News;* Littel Printing Company, Madison, Wis.; Shamokin (Pa.) *News-Dispatch;* Buffalo (N. Y.) *Evening News;* White Eagle Publishing Company, Trenton, N. J.; Guy H. Hewitt, Columbus, Ohio; Acme Printing Company, Inc., Everett, Mass.; Blied, Inc., Madison, Wis.; Beaumont (Texas) *Enterprise* and the *Journal;* Quinn and Boden Company, Inc., Rahway, N. J.; Kulm (N. D.) *Messenger;* Elk City (Okla.) *Journal;* Bertram (Texas) *Enterprise;* Atlanta (Ga.) *Constitution;* Windsor (Ont.) *Daily Star.*

Goss Presses for New York News

The New York *News*, which is said to have the largest circulation of any newspaper in the United States, has ordered seven additional Goss High Speed Anti-Friction Units and double folder for its Brooklyn plant. This new press, which is designed especially for the *News*, will raise

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1 6-foot steel makeup table with cast iron surface, dead slug bin, galley bin, 3 flat shelves 20 inches wide with three galley bins below, seven blank drawers 21 inches wide $150.00

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24-pt. Ultra Bodoni Italic, No. 2459	$40.00
18-pt. Cloister Bold, No. 1429	$40.00
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24-pt. Vogue Light, No. 3439	$60.00
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18-pt. Ultra Bodoni, No. 3415	$40.00
24-pt. Cloister Bold, No. 1450	$50.00
24-pt. Cloister Bold Italic, No. 2439	$50.00
24-pt. Century Bold, No. 435	$50.00
24-pt. Cheltonian Bold Italic, No. 1457	$40.00
18-pt. Cheltonian Bold Italic, No. 2415	$40.00
24-pt. Cheltonian Bold, No. 447	$40.00
18-pt. Cheltonian Bold, No. 431	$35.00
14-pt. Gothic Extra Condensed, No. 14-395	$20.00
24-pt. Chelt Condensed, No. 24-55	$40.00
8-pt. Roman No. 2 with Italic, No. 689	$20.00
24-pt. Century Expanded, No. 449	$50.00
18-pt. Chelt Condensed, No. 18-99	$30.00
18-pt. Bookman Italic, No. 18-87	$40.00
8-pt. Celtic, No. 8-59, Full Font	$40.00
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72-channel fonts have mixer slot No. 7
90-channel fonts have mixer slot No. 9

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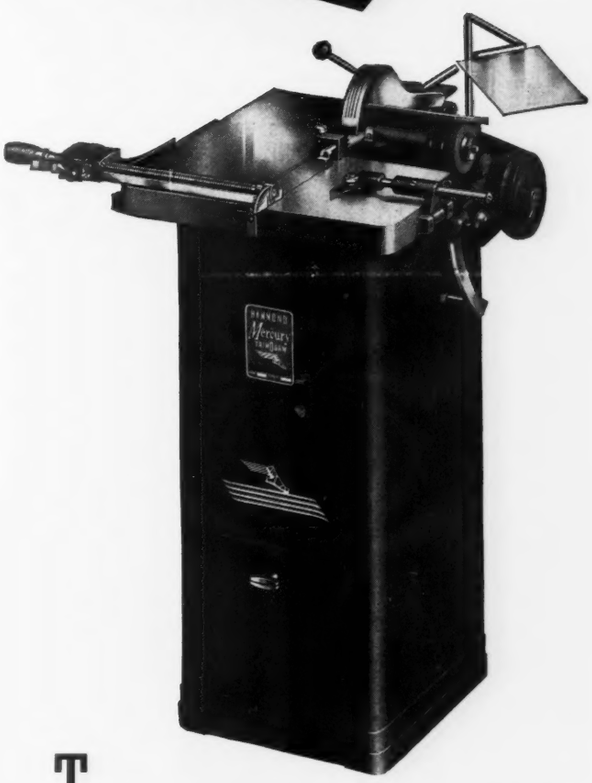

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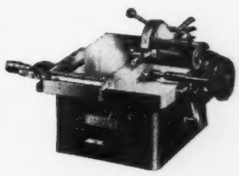

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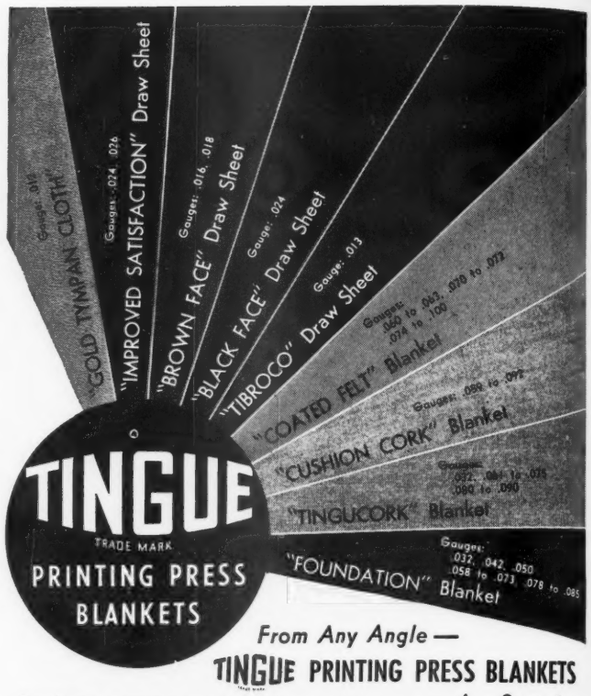


From Any Angle —
TINGUE PRINTING PRESS BLANKETS
— Are Superior

Stocked in gauges listed above.
Samples and detailed prices upon request.

TINGUE, BROWN & CO.
114-120 East 23rd St NEW YORK N Y
1227 Wabash Ave CHICAGO. ILL.
723 East Washington Blvd LOS ANGELES. CAL

the number of Goss units in the Brooklyn plant to 37 and make a total of 58 Goss Anti-Friction Units in the combined plants of this newspaper, as well as 29 additional High Speed Low Constructed Units. Variable speed delivery drives will be built into the folders, the units and folders having hypoid gear arrangements that will be used with the latest type motor drives. The press will be mounted on cast-iron substructures, a special spring mounting arrangement being supplied to prevent the transmission of vibration to the walls or foundations of the pressroom.

Goss Exports

Evidence of increased Latin-American buying in the United States is shown in two recent orders received by The Goss Printing Press Company. *O-Globo*, Rio de Janiero, bought an eight-cylinder Goss Multicolor Press, and *El Universal*, Mexico City, ordered four Goss Standard High Speed Units and one pair of folders. *O Globo* bought a complete set of the latest Goss curved and flat stereotyping equipment for color platemaking. *El Universal's* press is a unit-type octuple, equipped with paper roll stands at both ends for floor feeding. The press has a double folder, tensions, and motor roll hoists.

Goss Presses for Buffalo News

The Buffalo *News* has placed an order with The Goss Printing Press Company for the latest type High Speed Anti-Friction press consisting of four units and pair of folders. This new octuple will supplement the eight Goss High Speed anti-friction Units and pair of folders installed in 1937 and make a total of 30 Goss units operating in the *News* plant. The *News* has also ordered deep type wall brackets built for unit type motor drive, mounted on cast-iron substructure arranged for reels. The press will be equipped with hypoid gear drives, lead-in tape, ink manifold, and ink mist enclosures for each unit

Linotype Faces Recently Adopted

Linotype Legibility Group body faces (Ionic, Excelsior, Paragon, Opticon or Textype) recently have been adopted or added by the Eau Claire (Wis.) *Press;* Spencer (Wis.) *Record Register;* Boyd (Wis.) *Transcript;* A. J. Root Company, Medina, Ohio: Lansing (Mich.) *State Journal;* Kirksville (Mo.) *Daily Express;* Sioux Falls (S. D.) *Argus Leader;* Arnold Powers, Inc., Detroit; Nazarene Publishing House, Kansas City, Mo.; La Harpe (Ill.) *Quill;* C. E. Erickson Company, Inc., Des Moines, Iowa; Inter County Press, St. Charles, Minn.; Kulm (N. D.) *Messenger;* Billboard Publishing Company, Cincinnati, Ohio; Press Publishing Company, Dayton, Ohio; Woonsocket (S. D.) *News;* Clay City (Ind.) *News;* Owensboro (Ky.) *Messenger* and *Inquirer;* Streater (Ill.) *Times-Press;* Citizen Printing Company, Iowa Falls, Iowa; Humboldt (S. D.) *Journal;* Sentinel Publishing Company, Plattsburg, N. Y.; Nassau Printing and Publishing Company, Baldwin, N. Y.; United States News, Washington, D. C.; Reading (Pa.) *Eagle;* Passaic (N. J.) *Herald-News;* Dehler Press, Syracuse, N. Y.; Chatham News Publishing Company, Siler City, N. C.; Polish Everybody's Daily, Buffalo, N. Y.; Shamokin (Pa.) *News-Dispatch;* Plainfield (N. J.) *Courier-News;* New Wilmington (Pa.) *Globe;* Rupert (Idaho) *News;* Kalispell (Mont.) *News,* Midvale (Utah) *Sentinel;* Sausalito (Calif.) *News;* Examiner Printing Company, Pocatello, Idaho; Boston Jewish Advocate; Russell (Man.) *Banner;* Canadian Statesman, Bowmanville, Ont.; Toronto (Ont.) *Star.*

Reports Linotype Orders

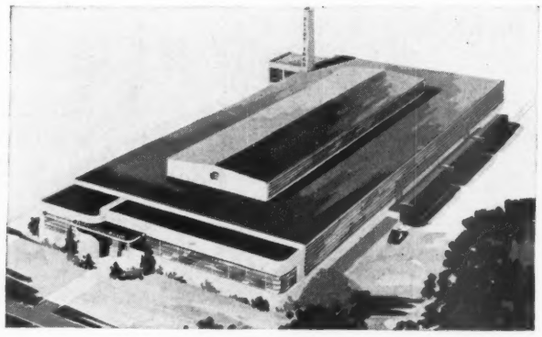
The latest issue of *The Linotype News* reports recent Linotype installations or orders received: The Boston *Herald* and the *Traveler* have ordered twenty-nine Linotypes; the Chicago *Tribune*, eleven; *Empresa Periodistica* of Montevideo, ten; the New York *Times*, four; and others.

Craftsmen Announce Plans

The 1940 International Association of Printing House Craftsmen convention will be held in San Francisco from August 4 to 8. This is the first year that a full four-day convention has ever been staged. Convention chairman is Col. George Filmer.

With the recent announcement that the San Francisco Fair will continue during 1940, the railroads plan, in a few weeks, to announce special rates. The Palace Hotel in San Francisco, featured in the new book *Bonanza Inn* for the important part it played in the romantic and historical development of the West, has been selected as Convention headquarters.

New Factory for Flint



Construction of a modern ink factory is now under way at Houston, Tex., by the Howard Flint Ink Company and will be completed about May 1. All types of printing, lithographing and newspaper inks will be manufactured. All new machinery and technical equipment will be installed. The factory is a one-story building, measuring 100 x 200 ft., with a railroad siding on the Southern Pacific R. R. at Clinton Drive, Houston.

Zephyr BLACKS

Favorites across the Nation

FOR
FLATBED PRESSES
★
Their drying speed
is amazing

WRITE - WIRE - PHONE
for our descriptive folder

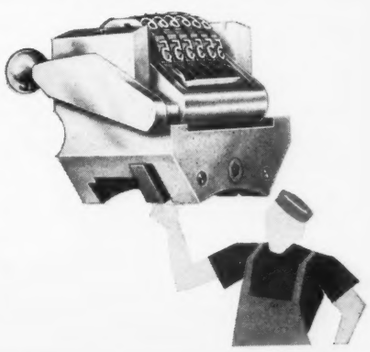
Sinclair & Valentine Co.
INKS MAIN OFFICE AND FACTORY
611 West 129th Street, New York, N. Y.

Albany, Baltimore, Birmingham, Boston, Chicago, Cleveland, Dallas, Dayton, Havana, Jacksonville, Kansas City, Los Angeles, Manila, Mexico City, Nashville, New Haven, New Orleans, Philadelphia, San Francisco, Seattle

ROTARY PRESSES

Equipped with
WETTER
Number Better

Locking time is reduced and fine adjustment is facilitated by exclusive features of Wetter Rotary Numbering Machines. Interchangeable, too, for right angle or parallel operation. Deeply engraved figures, accurately turned to cylinder sizes, insure better work.



WETTER NUMBERING MACHINE CO.
246 LOGAN STREET, BROOKLYN, NEW YORK

4 Exclusive Features of
The **Jordan**
CONTINUOUS
METAL FEEDER

1. Operating on a continuous chain, there is no need to pull back the chain and (hot) hook when a new pig of metal is to be attached.

2. The pigs are so spaced on the chain that they can not jam in the metal-pot.

3. The Jordan is a self-actuating feeder. Its movement is controlled only by the amount of metal in the pot so that there can be no sudden dropping of the pig to the bottom of the pot.

4. The Silent Alarm tells you when a new pig is to be attached.

Tell us the type of machine on which you want to install continuous feeding and we will ship you a Jordan Feeder with the proper support, ready to be attached in a few minutes by your machinist or operator. The price, including support . . . . . $75.

UNITED AMERICAN METALS CORP'N
200 Diamond St., Brooklyn, N.Y. 2246 W. Hubbard St., Chicago, Ill.
4101 Curtis Ave., Baltimore, Md. 785 Bryant St., San Francisco, Cal.

as fine a type metal as is made
UNITED AMERICAN

"IT SAVES US MONEY ON EVERY JOB"

"THAT'S what our job tickets say. The Mohr Saw enables us to go after the business with the assurance that there is no waste in our production costs." . . . and why not? With a Mohr Saw, those tricky, odd measure jobs are handled just as quickly and easily as straight composition. Each slug is sawed automatically to the desired length as it comes from the type casting machine. Simplified measure control is accomplished with a single dial. No liner changes. Simple and time saving. Adaptable to Linotype and Intertype. Mohr Saws are boosting production and cutting costs in progressive shops everywhere. Why not find out what they can do for yours?*

MOHR SAW

**19 different measures in this copy! Mohr Saw produced, of course.*

FREE
This interesting book shows how MOHR SAW handles all kinds of odd measure jobs — gives you the complete story of this unusual machine. Write for it today.

MOHR LINO-SAW CO.
128 No. Union Ave. Chicago, Ill.

"FLECTO"

GUMMED BACKING FELT

Recommended by Stereotypers everywhere

Coated with glue that will not slip or leave the matrix under heat. Tears easily. Made in gauges .025, .030 and .035—Sheets 18 in. by 24 in., and gauges .040, .045 and .050—Sheets 18 in. by 22 in. Cut into strips without charge.

Free samples on request

"PLATE-TAK"

CUT MOUNTING TAPE

No tacks. No cement to squeeze out. Simply lay a strip of this super-thin tape under the cut; press down by hand, and the cut is there to stay. When through, the tape strips off, leaving clean surfaces on both cut and base.

Free samples on request

EASTERN NEWSPAPER SUPPLY

9603 NORTHERN BLVD. CORONA, N. Y.

Two-Color Unit for Newspaper Flatbed Presses Utilizes Molded Rubber Plates

AN interesting development in flat-bed newspaper printing presses was revealed on February 21 when the Olympia (Wash.) *Daily Olympian* printed a two-color and black advertisement for the Shell Oil Company in its regular daily edition once through the press. The rubber plates for printing the color were affixed to printing cylinders contained within a separate unit which was mounted on the press frame of a Goss Cox-O-Type press as shown in the accompanying illustration. The color printing unit is an attachment which is geared to the press. The paper web passes through the unit just before running into the folder. The printing cylinder is 6½ in. diam. and extends across the press frame. Color can be printed upon four pages at a time.

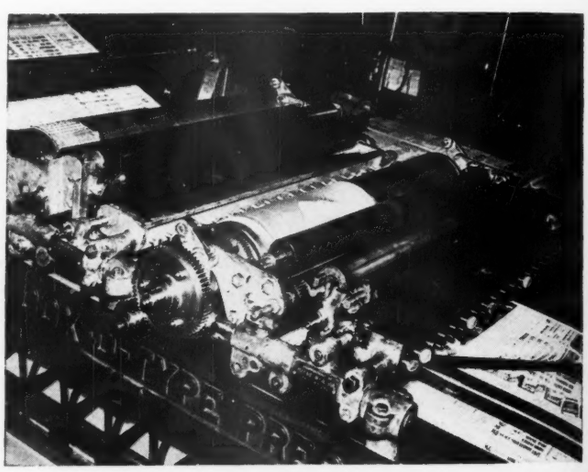
The device making the color printing possible was the result of several years' work by the McFar Manufacturing Company of Portland, Oregon, and William McCarter, pressman inventor, who designed and perfected the auxiliary attachment which is mounted on the top frame of the flat bed press.

A second part of the color printing device manufactured by the company is a hydraulic mat press. In this, type is first pressed into bakelite and a rubber color printing plate is then molded from the bakelite mat. The press is electrically heated and operates in the same manner as used for the manufacture of rubber stamps. The rubber plate is attached to the auxiliary cylinder on the flat-bed press, and adjusted to the correct position, permitting the color to strike in the proper place.

The *Daily Olympian* recently mounted two of these color units on its new 16-page Goss Cox-O-Type press.

According to General Manager Fred F. Chitty, of the *Daily Olympian* both ink coverage and register were highly satisfactory. The ink required for printing from the rubber plates was approximately 40% of the amount required by metal plates, Mr. Chitty said.

The attachment enables smaller daily newspapers to use color on the front page or on four pages of an eight-page section. Several Olympia advertisers have used the color process since the installation with satisfactory results.



View showing two-color rubber-plate printing unit mounted upon frame of Goss Cox-O-Type Press in plant of Olympia (Wash.) Daily Olympian.

DUPLEX PRESSES

Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

The Duplex Printing Press Co.

Battle Creek, Mich.

A CLEAN Plant is a PROFITABLE Plant

Keep your Plant clean with
BREUER'S BALL BEARING
TORNADO
CONVERTIBLE ELECTRIC
BLOWER Cleans EVERYTHING

Blows dust and dirt out of motors and machinery. Quickly convertible into suction cleaner for type cases, storage bins, floors, walls, etc. Sprays paint and insecticide. Hundreds of uses.

BREUER ELECTRIC MFG. CO.
5114 N. Ravenswood Ave. CHICAGO, ILL.

TAKE THE DUST OUT OF INDUSTRY with BREUER'S BALL BEARING TORNADO PORTABLE ELECTRIC BLOWER

Write for information and
FREE TRIAL OFFER

KLEAN-O-MAT
PROCESS
Quick, Efficient, Safe, Machine Method of Cleaning Matrices in the Magazines.
Write
KLEAN-O-MAT CORP.
60 East 42nd St. New York

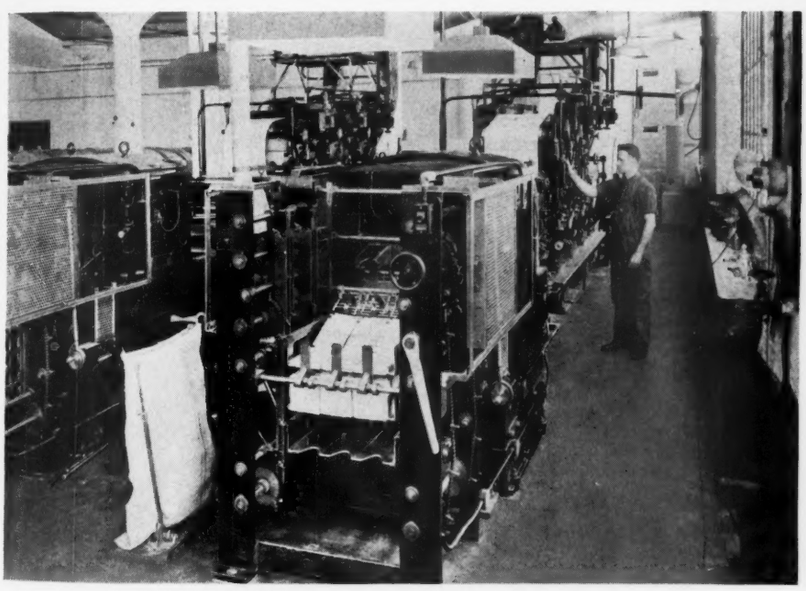
The dependable makeready protection of CROMWELL TYMPAN
helps you produce better looking printing at bigger profits
Order today from your local distributor
THE CROMWELL PAPER CO.
4801-29 S. WHIPPLE STREET CHICAGO, ILL.

STOP OFFSET
Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.
E. J. KELLY CO. 1807 No. Pitcher Street
FREE

ATTENTION STEREOTYPERS
Hundreds of stereotypers are getting perfect molding and stereotype mats through the use of **Franklin Apex Combination Molder** and the **Franklin Klean-print Molding Blanket.** Write today and let us send you samples and complete information on these products.
RUSSELL PRODUCTS COMPANY
702 Harrison Building, 15th and Market Sts. Philadelphia, Pa.

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

SAFETY·RELIABILITY·ECONOMY
CLINE
PRESS DRIVES and CONTROL
Reels, Tensions and Pasters...
CLINE SYSTEM
CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg.



The Jell-O Division of General Foods Corporation recently received a Gold Medal Award in the 1939 All-America Packaging Competition for the best single machinery installation in the packaging industry during the year.

The installation consists of two Champlain Combination Gravure and Letterpress Printing Machines, used for printing and die-cutting the Jell-O carton blanks. Each machine takes a roll of board, prints two colors by gravure, applies an over-all varnish, imprints the flavor names and recipes by letterpress and then scores and punches out the carton blanks from the web, at the rate of 600 blanks per min. The blanks are delivered in counted stacks.

The new machines have resulted in a considerable saving in manufacturing costs, over method formerly used, average efficiency being in excess of 80%. Waste averages approximately 2% exclusive of cutouts. The machines were designed, built and installed by Chambon Corporation.

Busk Passes

Anthony S. Busk, President of New Era Mfg. Co., died suddenly in Cincinnati on February 27. Mr. Busk was born in Copenhagen, Denmark in 1884. When he was eight years old he came to the United States. At an early age he went to work as a machinist apprentice at the Whitlock Printing Press Mfg. Co. in Shelton. Later he attended Pratt Institute, in Brooklyn, studying machine design.

In 1919 Mr. Busk went to Poughkeepsie, N. Y., as engineer and manager of the Hoe Corporation. He left there in 1932 to become vice president and chief engineer of the New Era Manufacturing Company of Paterson, N. J. In 1937 he became president of the company, which position he held at the time of his death.

EQUIPMENT

(*Continued from Page 30*)

Automatic Electric Glue Pots

A new automatic, dry type, electric glue pot, featuring a snap action thermostat which maintains a temperature of between 150 and 160 deg. F., the most efficient temperature for keeping glue at working consistency, is announced by the Westinghouse Electric & Manufacturing Company.

Westinghouse automatic electric glue pot with container removed.

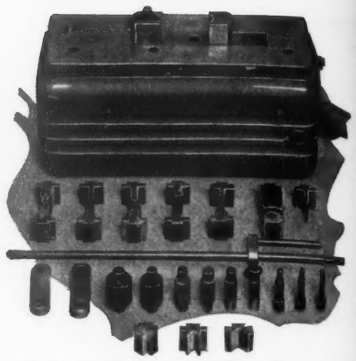
From 30 to 50 min. is required to heat a full 2 qt. container to 150 deg. F., the time being determined by the type of glue used. The removable glue container is approximately 7⅜ in. diam. and 9 in. high, made of nickel plated copper it will hold heat and yet withstand hard service under constant use. These units have a rating of 250 w., and operate at either 115 or 230 v.

Heavy insulation between the inner and outer vessel prevents heat loss; mica insulation protects the nickel-chromium heating element from the outer wall. Each unit is furnished with 8 ft. of heavy rubber insulated cord.

"Excel" Bender

ILLUSTRATED is the new "Excel" Bender manufactured by the J. A. Richards Company. This machine is used in the production of steel rule cutting dies used by the gasket, box, carton, felt, rubber, and asbestos trades and all industries manufacturing die-cut parts. This machine is especially adaptable to making formed flat wire pieces both in sample and small production lots.

It has many features not found on previous equipment such as concealed toggle mechanism, steel working table, and longer distances between the die holding posts.



View of Richards' "Excel" Rule Bender with Variety of Dies Available.

With the forming dies and round mandrel device illustrated, the machine produces not only irregular bends, but also tubular punches and radius bends of all sizes.

The machine is produced in several styles which vary according to the different forming die combinations wanted.

Hough Appointed

Joseph M. Hough, for 35 years associated with the Chicago *Tribune's* engraving staff, has been named superintendent of the photo-engraving department. He succeeds Louis Racicot, retired as of January 1.

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Technical Information and Literature

OFFERED GRATIS TO PRODUCTION AND MECHANICAL EXECUTIVES—SEND FOR IT

Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail — we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage — Keep informed — No obligation.

Pressroom

1 FLAT BED WEB PRESS — New Era states, "There are large profits for you in specialty printing." New Era Mfg. Co. gladly will send particulars and samples of work this press produces.

2 INKS — Morrill presents to the industry a series of specialized color books. No obligation, just circle this number on coupon and write in the type of ink in which you are interested. Interesting material will be promptly forwarded.

3 METAL BASE — Printing Machinery Company this month offers bulletin describing the Sterling Toggle bases, made of semi-steel to insure against "growing" and warping. Bulletin describes plate mounting system in detail. Use the coupon.

4 PAPER — "To get the most out of your printing, investigate Champion Paper, the foundation for good printing." Champion Paper & Fibre Co. offers information on its complete line of papers.

5 PRESS — New booklet explaining Kluge "Rigid Impression" will be mailed to you by Brandtjen & Kluge. Just circle this number on the coupon. We do the rest.

6 NUMBERING MACHINES — for flat bed and rotary presses are manufactured by the Wetter Numbering Machine Company. Full information and description offered.

7 PRINTING PRESS BLANKETS — Tingue, Brown & Company enumerate the various kinds of press blankets supplied by them. Prices and samples will be sent to you. No obligation.

8 AMERICAN TYPE FOUNDERS offers to send a press sheet and details on the Kelly Clipper. Use this service to check the advantages and features of this press. Fill out the coupon at the bottom of this page.

9 NEW OFFSET GUN — "Simpler, easy to operate — has all the proven features of previous guns." ATF offers complete details.

10 PRESS — "The No. 2 Kelly is the choice of the Government Printing Office for its efficiency in the 24 by 35 inch sheet size range." American Type Founders will send you complete specifications. Use this service.

11 LUBRICATION — "There is a Blanchard Pulsolator System for lubricating every type and size of printing press." Bulletin B-30 will be mailed to you promptly.

12 OFFSET PRESS — "To produce the best in Offset, you must have modern equipment." Harris-Seybold-Potter Co. offers interesting reading matter on its press — also information on Harris Litho chemicals.

13 ROLLERS & BLANKETS — Interested in learning more about "Mercury" rollers and blankets? Rapid Roller Company will mail full information to you. Circle this number on the coupon and mail.

14 INK — "Zephyr Blacks, for flatbed presses, are favorites across the nation. Drying speed is amazing." Sinclair & Valentine offers descriptive folder. Send for it.

15 BEARINGS — Timken Roller Bearing Company will forward interesting data on its bearings, which are designed especially for printing equipment. Circle this number on the post card.

16 PRESS — Learn more about the Goss high speed anti-friction press units. Goss offers to send details. No obligation.

Stereotype Dept.

17 FREE SAMPLES of "Flecto" Gummed backing felt and "Plate-Tak" Cut Mounting Tape are offered by Eastern Newspaper Supply. Circle this number on the coupon. We do the rest.

18 DRY MAT — Flexideal Dry Mat Corporation offers free samples of Flex Dry Mats. Mention gauge, shrink, type of equipment you use. Fill out the coupon and mail. We do the rest.

19 CATALOG of supplies for the printer will be mailed to you by American Publishers Supply. Contains many useful products used daily in stereotype departments. Coupon brings it to you.

20 DRY MAT — "For consistent readability, Certified clarity is a big help." Mail the card for further data. Gratis.

21 MAT CASTER — "Easy Kaster '8'", states Hammond, "casts perfectly in every respect with the minimum of effort. Single column to full page mats. Equipped with or without 800 lb. valve-controlled melting pot." Hammond will gladly send you prices, terms and descriptive matter.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 2289 (SEC. 510 P.L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*

1276 West 3rd Street

Cleveland, Ohio

Use this free service—Keep up to date on Equipment and Supplies

22 DRY MATS — "The face of Burgess 'Chrome' Mats has the property of permitting the casting metal to release readily, giving a fine stereo." Burgess will send booklet.

23 DRY MATS — Wood Flong offers sample lot of its dry mats. "Wood Mats give white highlights—solid blacks—true halftones and middletones — deep molds — clean plates."

Composing Room

24 CUT CEMENT—"Booth's Zink Cut Cement holds with the grip of a Tiger's paw — saves time in the composing room." Let the E. A. Booth Rubber Company send you full information. Circle this number on the coupon.

25 INFORMATION — on C&G Saw Trimmers will gladly be mailed to you by Milwaukee Saw Trimmer Corp.

26 DETAILS on New Universal Intertype are offered by the Intertype Corporation. Check up on this new typesetting machine. No obligation, just fill out the card.

27 REPLACEMENT PARTS for Linotypes and Intertypes. Use the postage-paid return card to get free catalog of parts, material and repairs. Offered by Montgomery and Bacon.

28 LINOTYPE PARTS CO. offers free information on its Linotype Distributor screws. "Convert your machines to fast distribution — at fraction of usual cost. Screws distribute matrices twice as fast with smoother delivery." Investigate. Free catalog.

29 COMPOSING ROOM SAW — New Hammond Mercury "has what it takes." Hammond also features popular priced Bench Mercury. Coupon brings you free complete literature. Learn more about these saws.

30 METAL FEEDER — "The Jordan continuous feeder has many exclusive features." United American Metals Corp. will be glad to send you interesting data. Learn more about this feeder.

31 FREE BOOKLET shows how Mohr Saw handles all kinds of odd measure jobs — gives you complete story. Offered by Mohr Linosaw Company.

32 VANDERCOOK offers interesting reading matter on its proof presses. Check up by mailing the postage-paid return card on this page. No obligation to you.

33 DETAILS AND SPECIMENS of Ludlow typefaces will gladly be sent you by The Ludlow Typograph Company. Learn more about Ludlow equipment.

34 ROTARY MITERER—"Where page costs are important and good appearance is necessary, the Rouse vertical Rotary Miterer is essential equipment." Complete catalog of various models will be sent to you. Use this free service.

35 FREE CATALOG —Hamilton Mfg. Company will send new No. 22 Catalog, containing full description of the various Hamilton type cabinets, bins, tables, etc.

36 PROOF PRESS — Interested in learning more about Challenge Series C Proof Presses? Fill out the coupon on this page. Challenge Machinery offers complete details. Gratis

Miscellaneous

37 RUBBER PLATE MOLDING — Interested in learning more about new developments in this type of equipment? American Evatype will gladly mail you description and details of its Evatype Precision molding press. Send for it. Circle this number on the coupon.

38 DOUTHITT CORPORATION offers complete catalog describing its complete line chemicals and supplies, photo engraving and lithographic plate making equipment. Send for it.

39 PAPER CUTTERS — Let the Seybold Division mail you information and circulars on its complete line of cutters. You are under no obligation.

40 PLATE-MAKING EQUIPMENT — Lanston Monotype Machine Company offers free catalog of Monotype-Huebner Platemaking equipment. Send for it. Use the post-card.

41 PRINTING EQUIPMENT MOTORS — Kimble Electric describes the modern design of its motors, built especially for the printer, in a booklet which will be mailed to you without obligation. Coupon brings it.

42 ZINC — "Dependable plates mean better engravings and more work for letterpress." Atlantic Zinc Works will send you booklet entitled "Getting Down To Zinc Facts."

43 INFORMATION — On Imperial Type Metal Company's "Plus Plan" will be sent to you. Use the coupon.

This coupon must be filled out completely in order to secure the literature or information you request. Circle only the numbers in which you are particularly interested.

PRINTING EQUIPMENT *Engineer* . March
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PRINT YOUR NAME AND ADDRESS

NAME..... TITLE.....DEPT.....

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US GOVERNMENT PRINTING OFFICE USES 7 NO. 3 VANDERCOOK PROOF PRESSES

The United States Government Printing Office did not gamble in selecting No. 3 Vandercook Proof Presses for making fine proofs of smaller forms containing halftones.

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This experience is typical --- and is repeated time after time by printers and publishers who install the No. 3 Vandercook Proof Press. That is the reason why it has become the favorite throughout the world for proving halftones and smaller forms.

The No. 3 Vandercook Proof Press is hand operated, self inking, and equipped with automatic grippers. It is practical equipment in small or large plants --- economical to install and easy to operate.

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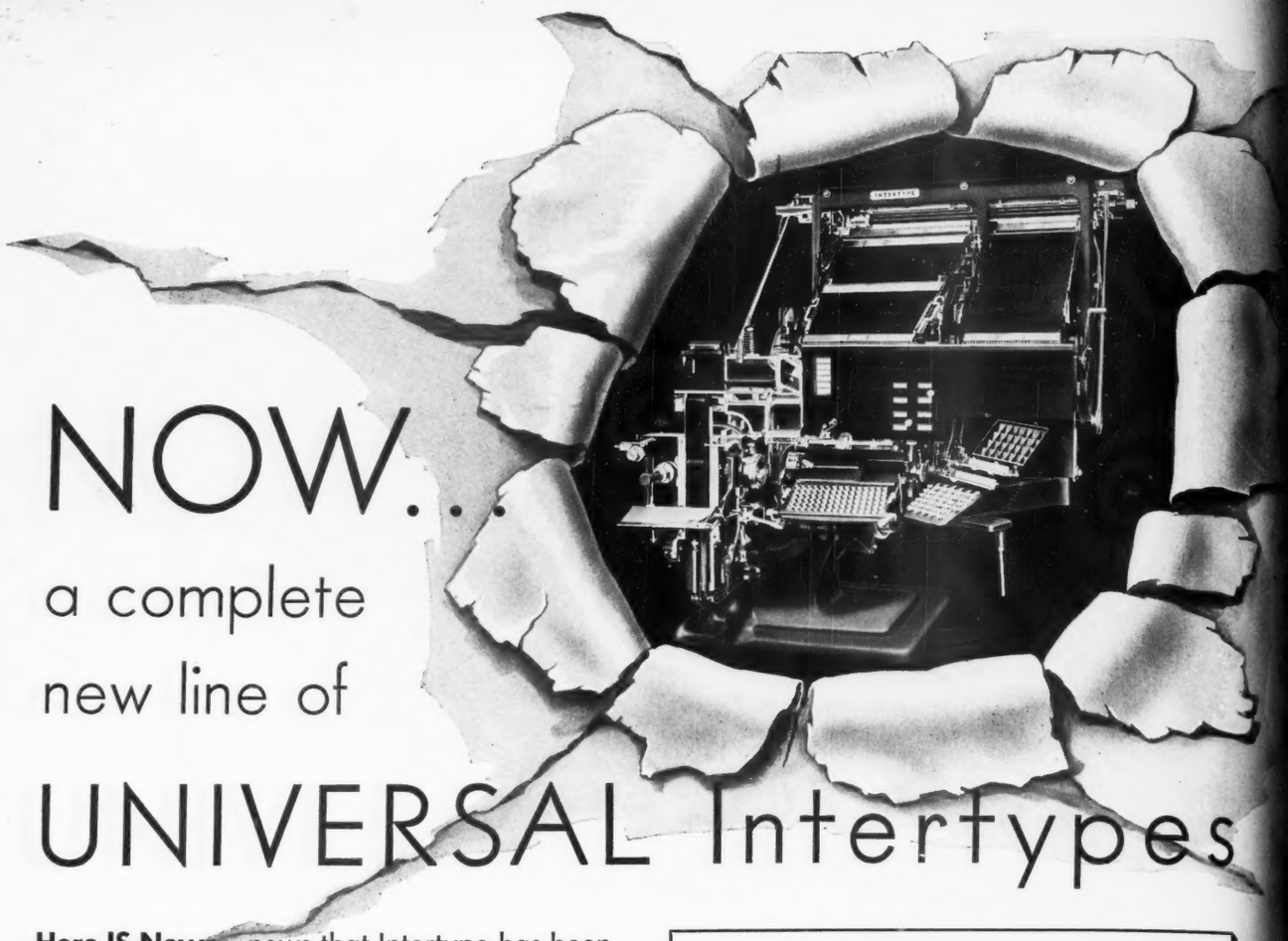

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